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NOT TO BE TAKEN AWAY.

THE FAUNA OF BRITISH INDIA,

INCLUDING

CEYLON AND BURMA.

Published under the authority of the Secretary of State for India in Council.

EDITED BY W. T. BLANFORD.

RHYNCHOTA.—Vol. I.
(HETEROPTERA)

BY

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PREFACE.

Although the first of the series of books containing descriptions of the Invertebrata belonging to the Fauna of British India appeared in 1892, up to the present time only six parts have been published. These are the four volumes of Moths, by Sir G. F. Hampson, issued in 1892, 1894, 1895, and 1896 respectively; one of Hymenoptera by Colonel C. T. Bingham, which appeared in 1897; and a small or half volume of Arachnida by Mr. R. I. Pocock, published in 1900. The eight volumes of Vertebrata, which were issued in the years 1888–1898, are a part of the same general work.

The slow progress hitherto made with the Indian Invertebrata has been caused by the difficulty of obtaining the assistance of authors who, besides possessing the necessary zoological knowledge and an acquaintance with the Indian fauna, are able to give the time required for the study and description of all Indian forms belonging to a particular group, and who have also access to the principal collections and to good zoological libraries.

There is at the present time a fair prospect that the work will advance more quickly than has been the case during the last ten years. The volume now issued contains the first part of the Rhynchota or Hemiptera, by Mr. W. L. Distant, who has for many years devoted himself to the collection and study of this large and important order of insects, on

which he is one of the principal living authorities. The present volume is occupied by an account of the first three families of the suborder Heteroptera. It is hoped that future volumes will contain descriptions of the remaining families, both of Heteroptera and Homoptera, of which the Indian forms are sufficiently known to enable an account of them to be compiled.

Other volumes on Indian Invertebrata are in preparation, and two are so far advanced that their early publication may be expected. These two are a volume on Ants by Colonel C. T. Bingham, and another on Longicorn Coleoptera by Mr. C. J. Gahan. A volume of Land-Mollusca is also in hand, and arrangements are being made for further additions to the general series.

W. T. BLANFORD.

June 15th, 1902.

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INTRODUCTION.

RHYNCHOTA.

This volume is the first of a series designed to afford means of recognizing members of that large group of Insects, the Rhynchota, or Bugs, of British India. Scattered papers on the subject by various entomologists have appeared from time to time, and my late and much respected friend, Mr. E. T. Atkinson, commenced a full descriptive enumeration of the fauna in his "Notes on Indian Rhynchota" which he published in the Journal of the Asiatic Society of Bengal. This good work only reached, so far as the Heteroptera were concerned, the end of the Family Pentatomidæ, and was prepared at Calcutta under great limitation, away from collections and consequent facilities for comparison. Since the publication of Mr. Atkinson's "Notes," much more material has become available, and with an increased interest in these insects we may expect many and large additions to be made to our knowledge of the fauna.

The material principally used in this publication comprises the following fine collections:—A very representative one, said to have been made some years ago by Dr. Leith at and near Bombay, though it seems probable that some of the specimens were obtained from Sind. Dr. Stoliczka's collection made during the Second Yarkand Mission, which I worked out in 1879, proved of the greatest importance in showing the Palæarctic affinities of this region. Another, and perhaps the best and largest ever brought together by one collector, was that made by Mr. A. W. Chennell in the Assam Hills, and brought to this country in 1879, a representative set of which passed into my possession. The late Mr. Doherty also sent me all the Rhynchota he procured in Assam and Burma; while from the last locality I have been allowed by Dr. Gestro, of the Genoa Museum, to examine the fine collection made by Signor Fea. To Sir G. F. Hampson I am indebted for his captures in the Nilgiri Hills; and to Mr. R. M. Dixon of Bombay I am under similar obligation for species collected at the Bor Ghât, with many valuable notes which I have incorporated under his name in the text. Dr. Alcock has forwarded to me for investigation and determination the extensive collection contained in the

Indian Museum, Calcutta; and I have received great assistance from Dr. H. S. Ferguson, in charge of the Museum at Trivandrum. Of the Ceylonese fauna much material has been acquired. My friend Mr. G. Lewis, who visited that island some years ago, and brought his experience as a field coleopterist to the collection of Rhynchota, made a most representative collection which he handed over to me intact; and while engaged in preparing this book I have received from Mr. E. E. Green very much assistance. The British Museum contains a fine collection of North Indian species—many still unique—presented at various times by travellers and military men stationed in the hill districts. Many of these were described by Walker, and I have examined and verified all his types. The collection acquired by the Rev. F. W. Hope, described by Westwood, and now in the Oxford Museum, has also passed through my hands by the good offices of Prof. Poulton. From Tenasserim, the south-eastern extremity of our faunistic area, I have received the material acquired by Doherty, and also that of Limborg, a collector sent thither some years ago by the late Prof. Wood-Mason. Fea also collected in Tenasserim, and I have examined his material; whilst I previously worked out the specimens collected by Dr. Anderson in the Mergui Archipelago.

From the Andamans and Nicobars my material has been very small. From both these islands I received a small collection made by Prof. Meldola during the Transit of Venus Expedition, and likewise acquired the few specimens collected by De Roepstorff in the Andamans. I visited Car Nicobar in the sixties, but at the height of a dry season, and was thus prevented from forming an even representative collection.

I must also gratefully acknowledge the assistance I have received by the loan of specimens from Dr. Chr. Aurivillius and Dr. Yngve Sjöstedt, of the Stockholm Museum; Dr. Horvath, of the National Museum, Budapest; Dr. Handlirsch, of the Hof Museum, Vienna; Dr. Gestro of Genoa, Prof. Bouvier of Paris, and Dr. E. Bergroth of Tammerfors. Mention must also be made of the untiring pains taken by the artist Mr. H. Knight to produce accuracy in the structural details of his illustrations.

Some alterations and corrections made in the construction of generic and specific names must be placed to the credit of the Editor, Mr. Blanford. This will explain why in the nomenclature some names are not quite the same as those previously used by me in other places, where I have frequently followed general usage rather than the strict canons of the Greek and Latin grammars.

Reference must also be made to the method here used in diagnosis. My instructions from the first were, wherever possible, to use brevity with clearness—the book, as I understood it, being primarily for the use of those who are in British India and who wish to understand their fauna and recognize its representatives. Consequently I have not sought to give so full and minute a description as might afford differential characters for comparison

with allied species belonging to other areas, but rather aimed at differentiating the Rhynchota of British India alone. For this purpose I have used colour differences wherever possible, so as to facilitate identification by officers of the Government of India, planters, travellers, and, in the strict sense, non-entomological readers. With the same intention I have not attempted written description of such details as the important but obscure odoriferous apertures to be found on the metasternum. These by the aid of joint effort with the artist have been so accurately portrayed, as to prove that a good figure of a functional structure is far more trustworthy than any diagnostic composition.

The Rhynchota, or Bugs (frequently styled Hemiptera), constitute an extensive Order in the Class **Insecta** belonging to the Phylum **ARTHROPODA**, and are principally distinguished by possessing a jointed suctorial rostrum—sometimes described as a "proboscis or mobile beak"—formed from the labium, composed of the mandibles and maxillæ modified into a piercing-organ, and usually concealed by being closely recurved or bent back under the head, sternum, or abdomen. The wings are almost constantly four in number in the suborder **Heteroptera** (to which this volume is restricted); the anterior wings are of a more or less coriaceous texture, folded flat on the back, their apical areas being usually of a membranous character. In the **Homoptera**, which will be subsequently dealt with, the wings cover the abdomen in a roof-like manner, and the anterior wings do not always exhibit a difference in structure between the basal and apical portions *.

The metamorphoses of the Rhynchota are somewhat varied, being practically absent in the Heteroptera, in which the young in a general or progressive manner resemble the adult; in the Homoptera the change may be very incomplete, as in the Cicadidæ, or almost complete, as among the male Scale-insects (Coccidæ). As in the order Orthoptera, the mouth does not change its structure during the individual life, and Dr. Sharp on these grounds considers the Orthoptera and Rhynchota as "the most different of all the Orders," and the last as "the most isolated of all the orders of Insects." Sharp places the Rhynchota after the Diptera and Thysanoptera (*Thrips*) at the end of the Insecta; Packard arranges them between the Coleoptera and Orthoptera; Westwood between the Lepidoptera and Aphaniptera and Diptera. If the views of entomologists thus differ as to the position which the Rhynchota should occupy in the classification of the Insecta, the most recent writers on general zoology are also divided in opinion. Shipley and MacBride place these insects between the Hymenoptera and the Diptera; Parker and Haswell dispose of them after the Orthoptera and before the Diptera; while Schmeil arranges them

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* Some writers include the Anoplura, or Lice, as a third suborder.

between the Neuroptera and Orthoptera. Dr. Dohrn, from a study of the fossil *Eugeron böckingi*, considers that at a very remote period a form existed from which both the Neuroptera and Rhynchota were differentiated.

Although some of the Rhynchota are rapacious in their habits, many—especially a very large number of Pentatomidæ and Coreidæ—are plant-feeders. In some instances we have proof of their injurious action, as detailed in the pages of this volume; in other instances their operations are so minute that the injuries they cause are apt to be overlooked, and are of a cumulative rather than of an immediate nature. But the Rhynchota are also at times beneficent agents; and Mr. R. M. Dixon has pointed out how pollination in the 'Mora' tree (*Macaranga roxburghii*) seems to depend entirely on the visits of *Cantao ocellatus*, while *Aspongopus nigriventris* fulfils a similarly important function to the Sago Palm (*Caryota urens*). A vast opportunity for bionomic observation appertains to the study of these insects, and is specially worthy the attention of a government entomologist.

The Rhynchota afford many examples of those cases of resemblance to distinct insects of their own, or other orders, which by some are ascribed to the action of concurrent evolution, and by others are explained by the theory now so well-known as mimicry. Some Ant-like forms are the most remarkable, and Mr. Wroughton recently exhibited to the London Entomological Society an Indian Coreid which associates with the Ant *Polyrhachis spiniger* and is furnished with spines on the pronotum &c., resembling almost exactly those possessed by the Ant. This singular Coreid proved to be the *Dulichius inflatus* of Kirby, previously reported from Southern India and Ceylon. Similar mimicking species belonging to other families have passed through my hands from Africa and Central America.

It is probable that the Rhynchotal fauna of British India is one of the richest to be found in any similar area of the world, and there is fortunately another, that of Central America, of which we have sufficient knowledge to enable a comparison to be made. The Central American fauna has formed the material for that gigantic publication, the 'Biologia Centrali-Americana,' still in progress, and the editors and publishers, Mr. Godman and the late Mr. Salvin, spared no effort or expense, either in purchasing available material or despatching collectors to procure it. Mr. Champion, an experienced collector, passed some years in the country investigating the insect fauna, and made vast collections; he gave particular attention to the Rhynchota, and to the small species of that order usually neglected by collectors. Besides this immense material, we must also consider the extent and nature of the area, from the north of Mexico to the Isthmus of Panama, approaching the Nearctic region in the north, as the Palæarctic is reached in North-eastern India; while the central and southern districts are practically between the same parallels of latitude as those of India,

and possess a luxuriant vegetation. Moreover, the present writer has worked out a large portion of the Rhynchotal fauna of the two areas.

The following is a comparative statement of the genera and species belonging to the families treated in this volume:—

Comparison of a portion of the Rhynchotal Faunas of British India and Central America †.*

Fam. Pentatomidæ ..	British India....	Genera 199,	Species 541
	Central America .	,, 104,	,, 384
Fam. Coreidæ	British India....	Genera 45,	Species 143
	Central America .	,, 72,	,, 206
Fam. Berytidæ	British India....	Genera 3,	Species 4
	Central America .	,, 3,	,, 4

It will thus be seen that in the Pentatomidæ British India is far richer in genera and species than Central America, while in the Coreidæ the proportion is reversed; the Berytidæ of the two areas are very similar in numbers, but most probably we know very little of the family in either region. In Pentatomidæ, British India is apparently the most prolific region in the world.

Perhaps no palæontologists have more reason to complain of the imperfection of the geological record than those who study the insects of past times. Insect-remains are frequently badly preserved, and such wing-venation as can be studied has sometimes led to discordant conclusions. Scudder is our first authority; and in the last edition of Zittel's 'Text-book of Palæontology' he writes:—"The oldest known fossil insect is a somewhat obscure wing, plainly Hemipterous (*Protocimex silurica*, Moberg), from the Graptolite Slates of the Swedish Upper Ordovician." The Carboniferous evidence is conclusive. The presence of Rhynchota in Permian rocks is somewhat open to argument, but on the whole trustworthy. When we come to later times, we may refer to Scudder's 'Tertiary Insects of North America,' the largest work of its kind, and one dealing considerably with the Rhynchota. According to Scudder, writing in 1890, the number of Tertiary Rhynchota of the whole world was then estimated at 569, of which 355 were Heteroptera and 214 Homoptera.

External Anatomy.—The principal structural details of the Heteroptera are represented in the following outline figures of *Mattiphus laticollis*, Westw., a species belonging to the British-Indian fauna. The structural terms here given agree with the

* As enumerated in this volume.
† 'Biologia Centrali-Americana,' Rhynchota, vol. i.

terminology used in the present work in the descriptions of genera and species.

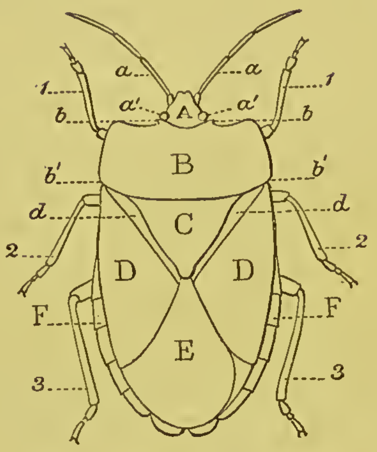

Fig. 1.—Body seen from above.

A. Head.
B. Pronotum.
C. Scutellum.
D. Corium.
E. Membrane.
F. Connexivum.

a. Antennæ.
a'. Eyes.
b. Anterior pronotal angles.
b'. Lateral or posterior pronotal angles.

d. Clavus.
1. Anterior legs.
2. Intermediate legs.
3. Posterior legs.

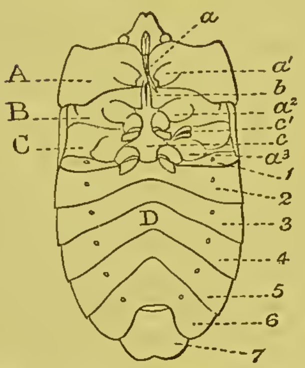

Fig. 2.—Body as seen from beneath.

A. Prosternum.
B. Mesosternum.
C. Metasternum.

These three segments together constitute the sternum, and the sides of the sternum are known as the pleuræ; the sockets into which the legs articulate are called the acetabula.

D. Abdomen, exhibiting six segments (1–6) and anal appendages (7).

a. Rostrum.
a'. Anterior coxæ.
*a*². Intermediate coxæ.
*a*³. Posterior coxæ.

b. Mesosternal ridge or carina.
c. Metasternal plate.
c'. Odoriferous aperture.

The head is very variable in form, especially in the Homoptera, and particularly in the Fulgoridæ, in which family it is inflated and produced in a way for which at present no absolute explanation can be offered. In the Heteroptera the head is usually more or less triangular in shape, but exceptions occur in all the families. It varies in prolongation and constriction, and although the eyes are generally placed at or near the anterior margin of the pronotum, there are genera in which they are far remote from the pronotal margin. It also varies in its direction as well as shape: in some species it is horizontally produced, in others obliquely deflected, or again perpendicularly deflected; and these three forms of structure can be found in the Pentatomidæ alone, without referring to other families. The head above is anteriorly composed of three lobes—one central and two lateral; or, as they are frequently styled, respectively, the tylus and juga. Ocelli are usually

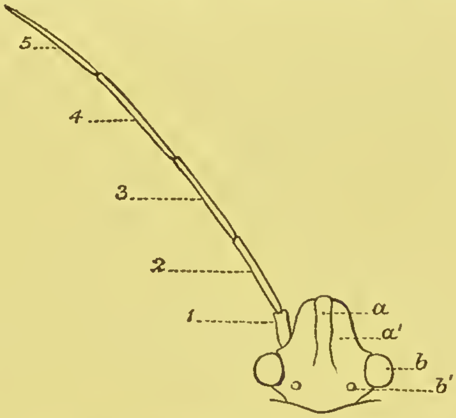

Fig. 3.—Head, seen from above, of *Catacanthus incarnatus*.

a. Central lobe (*tylus*). *a'*. Lateral lobe (*jugum*). *b*. Eye. *b'*. Ocellus. 1, 2, 3, 4, 5. Antennal joints.

present, but are sometimes wanting in a whole family, as in the Pyrrhocoridæ, or even absent in one genus of a small subfamily of Pentatomidæ, as for example in the Urostylinæ. The compound eyes vary much in position and shape. Grenacher has divided the eyes of insects into three divisions, according to the presence or absence of a well-developed cone. *Acone eyes* are those in which the cone or refracting body is wanting, but is represented by four primitive cone-cells; and according to Packard these occur in the Rhynchota, excluding the Homopterous Cicadidæ, which have *Eucone eyes*, distinguished by possessing a well-developed cone. The antennæ are usually free and visible, as in the Heteropterous series Gymnocerata, or hidden in foveæ under the head, as in Cryptocerata; sometimes, as in many Homoptera, they are minute and hair-like. The antenniferous tubercles from which the antennæ

proceed vary in size and are not invariable in position, being sometimes on the upperside and sometimes on the underside of the head, and in some families produced into a lateral process or spine. The number of joints is not a regular quantity: in the Pentatomidæ genera are found with antennæ of either four or five joints; in some Reduviids the antennæ are apparently eight-jointed, the maximum number of about twenty-five being attained in the males of some Coccidæ. These joints vary in thickness, but are usually more or less symmetrical, though in the Coreidæ some genera, notably *Dalader* and its allies, have the third joint dilated and prominently compressed. The rostrum originates from the underside of the head, which is excavated to receive the first rostral joint in repose; it is usually three- or four-jointed, and apically encloses or enwraps four fine setæ, which by some entomologists are considered to represent the mandibles and maxillæ found in other insects. This subject, however, cannot be discussed here; but Sharp, who has investigated the question, may be best quoted as to the use of the organ:—"The rostrum being extended from its position of repose, the tip of the sheath is brought into contact with the object to be pierced, the surface of which is probably examined by means of sensitive hairs at the extremity of the sheath; these therefore functionally replace to some extent the palpi of other insects. As a rule, the sheath does not penetrate (though there is reason for believing that in various of the animal-feeding bugs it does so), but the setæ are brought into action for piercing the skin of the plant; they are extremely sharp, and the outer pair are usually barbed, so that when once introduced a hold is easily maintained. This being established, it is thought that the salivary pump comes into play, and that a fluid is injected into the object pierced so as to give rise to irritation or congestion, and thus keep up a supply of fluid at the point operated on; this fluid extends along the grooved setæ by capillary attraction, and the rapidity of the current is increased by a pumping action of the pharynx, and possibly by movements of the setæ themselves. Though the setæ are often extremely elongate—sometimes several times the length of the body—they are nearly always slender, and there is no reason to suppose that a perfect, or air-tight, tube is formed; hence it is probable that capillary attraction is really the chief agent in the ingestion of the fluid. The slight diversity of structure of the Rhynchotal trophe* is in very striking contrast with what we find in mandibulate insects, such as Diptera and some divisions of Hymenoptera. Schiödte, in commenting on this, has suggested that it is probably due to the small variety of actions the rostrum is put to." (Cambridge Nat. Hist. vol. vi, pp. 536–7.)

The thorax is composed of three segments—the prothorax, mesothorax, and metathorax, the upper surfaces of which are known by the names of pronotum, mesonotum, and metanotum:

* Or buccal appendages=buccalæ.

while on the underside these segments are distinguished by the names of prosternum, mesosternum, and metasternum, together being entitled the sternum, the sides of which are known as the pleuræ. The pronotum is always very large, and is more or less the whole of the thorax which is clearly seen above; the prosternum is the origin of the anterior legs. The mesonotum appears above in the scutellum, which is always well developed, and in some instances (Plataspininæ and Scutellerinæ) is of great size, completely covering the abdomen and concealing all traces of wings; from the sides of the mesothorax issue the anterior wings or hemelytra, while beneath the mesosternum is the origin of the intermediate legs. The metanotum is not visible when the wings are unexpanded; from the sides of the metathorax issue the posterior or true wings, and the posterior legs originate from the underside or metasternum. On each side of the metasternum

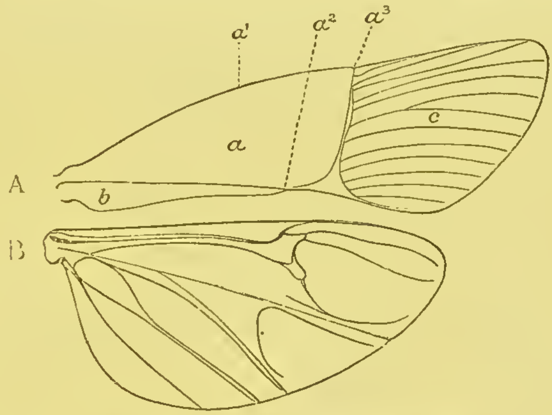

Fig. 4.—Wings of *Catacanthus incarnatus.*

A. Anterior wing or hemelytron.
- *a*. Corium. a^1. Lateral margin of corium.
- *b*. Clavus. a^2. Inner angle of corium.
- *c*. Membrane. a^3. Apical angle of corium.

B. Posterior or true wing.

and near the posterior coxæ may be seen the odoriferous apertures or "stink-glands," sacs from which the peculiar odour arises, so well known as appertaining to these insects. These glands are, as a rule, present in the plant-feeding species, but in some of the carnivorous forms (Reduviidæ, Nepidæ, Notonectidæ) they are entirely absent, at least as a metasternal apparatus. The smell is not always offensive; it has been described as resembling that of well-ripened pears or bananas, or that of a fine bergamot pear, or a sweetish smell like ether. In many species it is, however, of a distinctly disagreeable character. These orifices are of considerable classificatory value, especially in a generic sense, but up to the present time their taxonomical value has scarcely been

universally maintained. In the figures given in this volume these apertures have been portrayed in nearly every genus.

The five appendages to the thorax, the two pairs of wings and the three pairs of legs, must now be described. The anterior wings or hemelytra are the most important, as they are not only very diverse in structure but they also afford taxonomic characters very largely used in the classification of some groups and families.

The corium is the hard, coriaceous portion, and the clavus a similar but distinctly divided portion lying next to the scutellum. The membrane or apical portion of the hemelytron is nearly always present, though sometimes in a very reduced or aborted condition, and the veins vary very much in number and arrangement; in fact the variation is so great in different genera of the same family, as in Pentatomidæ, that at present little sound evolutionary guidance seems to be afforded by the venation, unless averages and large groups are studied. The posterior wings need scarcely be considered at length in this place, as they are seldom used as classificatory characters, with the exception of the hamus, sometimes present as a spur-like vein to the cell.

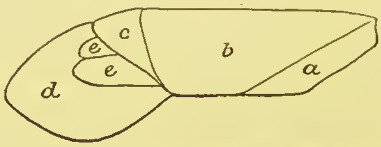

Fig. 5.—Anterior wing or hemelytron of a Capsid.

a. Clavus. *b.* Corium. *c.* Cuneus. *d.* Membrane. *e, e.* Cells of membrane.

The corium, however, in some families possesses an increasing specialization in structure; thus in the Capsidæ a distinct addition may be noticed in the appearance of a cuneus, or separation of the external apical area of the corium.

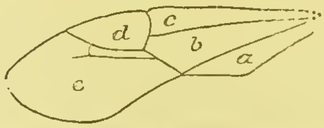

Fig. 6.—Anterior wing or hemelytron of a Cimicid.

a. Clavus. *b.* Corium. *c.* Embolium. *d.* Cuneus. *c.* Membrane.

In the Cimicidæ another division of the corium occurs, and an embolium, or separation of the lateral area of the corium, is observed.

In the Tingididæ the distinction between corium and membrane is less distinct, and these terms are scarcely used in the descriptive terminology, the membrane being reticulated and resembling the other portion of the hemelytra.

The legs do not call for much comment. They are variable in structure, but are fully described in the diagnoses of genera and families. Thus the coxæ may be placed close together or considerably apart, as in some Coreidæ; the femur may be slender or thickened and spined; the tibiæ may be simple, serrate or pilose; the tarsus may consist of two or three joints and may bear a claw or claws; the structure is also of an adaptable character in the aquatic species.

The number of abdominal segments is a question of considerable difficulty, and they have been variously estimated as being nine, ten, or eleven in number. This is due to the method of anatomical study and the inclusion or non-inclusion of the anal appendages as segments or otherwise. If, however, the apparent number be accepted, as is generally done in classification, there are six segments, the basal often much concealed, apart from the anal plate and organs. The last named are often, as in Lepidoptera, used as specific characters, and in fresh or spirit-preserved specimens are doubtless of the greatest validity; but when, as is more often the case, they have only been observed in dried specimens, in which they are naturally more or less distorted, an element of uncertainty is introduced. For certitude a dissection requires to be made, and in the present position of Rhynchotal study this can scarcely be always expected.

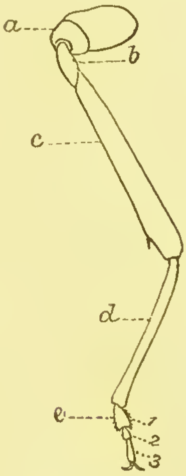

Fig. 7.

Leg of a Pentatomid.

a. Coxa.
b. Trochanter.
c. Femur.
d. Tibia.
e. Tarsus.
1, 2, 3. Tarsal joints.

The females of many Heteroptera and Homoptera possess a well-developed ovipositor which serves to lacerate the leaves of plants and to introduce the eggs into the orifice thus made.

Stridulatory organs have been discovered in the Corixidæ and doubtless exist in many genera of other families. Stridulation may be almost universal in the Insecta, although it is not detected by our imperfect sense-organs; the investigation of this subject is certain to be more pursued in the future, aided by delicate testing-apparatus.

Internal Anatomy.—To adequately describe the internal anatomy of any insect requires ample space and a wealth of illustration; in fact it is a subject by itself. The student may be referred on this investigation to Packard's 'Text-book of Entomology' (1898),

which not only treats the whole subject in detail, but gives very full bibliographical references under each section. So much has been copied on this matter by one writer from another (original investigation requiring skilful and delicate manipulation combined with a thorough physiological training) that we can only summarize the most condensed information. The number of entomologists who study this branch of the science is to-day infinitesimal, in fact anatomy is almost entirely neglected. According to Sharp: "The alimentary canal presents considerable diversity and some remarkable features. There is a slender tube-like œsophagus and a large crop. It is difficult to assign any of the parts posterior to this to the divisions usual in other insects, and it is said that the distinction of parts histologically is as vague as it is anatomically." (Cambridge Nat. Hist. vi. p. 540.) Packard describes the œsophagus as "usually small and short, while the much convoluted stomach is very long and subdivided, first into a large, straight, glandular portion; second, into the convoluted smaller part; and third, in some Pentatomids and Coreids there is a third stomach," which, quoting Siebold, he describes as "consisting of a very narrow, slightly flexuous canal, on which are inserted two or four rows of closely aggregated glandular tubes" ('Guide to Study of Insects,' p. 517). There is no gizzard; the number of Malpighian tubes is usually four, one pair only being found in Coccidæ, and none in Aphidæ. Packard describes the nervous system as consisting, besides that of the head, of two thoracic ganglia, of which the anterior is the smaller, which send off two main trunks to the abdomen. "In *Pentatoma* all the three ganglionic masses are brought into close proximity, but in *Nepa* the thoracic mass of ganglia and the infra-œsophageal ganglion are widely separated" (Sharp).

In the reproductive system the Rhynchota exhibit some peculiarities in the testes, and according to Packard the number of testicular tubes is small in most members of the Order, but very great in the Cicadidæ, as in Orthoptera, Coleoptera, and many Hymenoptera ('Text-book of Entomology,' p. 495).

Reference has already been made to the metamorphosis or post-embryonic development of the Rhynchota, as being a development in which the young differs but little from the adult. This is quite true in a general way, but it is not a precise statement, as the immature forms have a general and apparent, but not exact, resemblance to the perfect insect. No inconsiderable service would be rendered to entomology, if some of our readers in India would undertake the investigation of this subject, carefully describing and *drawing* the various modifications in metamorphosis from the first to the adult stage, with a record as to the exact period occupied in each stage of development.

The field collector of Rhynchota will soon acquire a more perfect acquaintance with the habits of these insects than can be derived from the perusal of entomological books. Many small

species are seldom seen, but can be freely secured by the use of the sweeping-net in grasses and other short herbage; this method is particularly successful with the Capsidæ. The beating of the leaves and twigs of trees by a stout stick over an open umbrella is also a productive process. Other species, including many Reduviids, may be netted on the wing, as they fly in the sunshine like some Coleoptera. No inconsiderable number may be easily picked from the leaves of trees; and in the dry and cold season a number hibernate, and may be found beneath stones, &c. Some are attracted by the electric lights in the busy streets of towns, and in the Transvaal I have taken many of the large aquatic Belostomas in such situations. Among the Homoptera the large Cicadas are to be detected by their shrill cries, and although silence is observed when one approaches the trees from which these sounds proceed, a careful search will usually result in the discovery of the insect. Of the habits of some Rhynchota we know practically nothing. Tingididæ are generally found in the sweeping-net, and some entomologists have never seen these insects *in situ*. Some species are found blown out to sea at a considerable distance from land, and the saloon deck of an ocean-liner is often visited by many of these involuntary migrants. *Nezara viridula* is a species frequently thus encountered, and is, as recorded in these pages, of world-wide distribution.

Classification.—Sharp estimates (1899) the total number of Rhynchota described as about 18,000, two-thirds of the number being Heteroptera. In Britain there are about 430 species of Heteroptera and 600 of Homoptera. This is opposed to Scudder's estimate that the Homopterous fauna of any given region of considerable extent in the north temperate zone is to the Heteropterous fauna as about one to three, or that about 25 per cent. are Homopterous (Tertiary Ins. N. Amer. p. 238). The fact is that the smaller Homoptera have not been sufficiently collected and described in most countries, and this explains the divergence between the number of Heteroptera and Homoptera in Britain and in other faunistic areas. A great disparity between Homoptera and Heteroptera is exhibited in the enumeration of fossil Rhynchota, but the difference in structural integument is a sufficient explanation of the preservation of one rather than the other.

The Rhynchota are divided into two suborders, the Heteroptera and Homoptera, by general consent, though Westwood in his 'Modern Classification of Insects' (1840)—a work justly considered as an entomological classic—kept both these divisions as separate orders. They may be well separated by Sharp's modification of the views of Schiödte.

Synopsis of the Suborders of Rhynchota.

Front of head not touching the coxæ .. *HETEROPTERA.*

Front of head much inflexed so as to be in contact with the coxæ .... *HOMOPTERA.*

Synopsis of the Families of the Heteroptera.

Series I. Antennæ conspicuous, capable of being moved about freely in front of head .... **GYMNOCERATA.**

1. Abdomen not clothed beneath with a silvery velvety pubescence. (Species not aquatic.)
   - A. Scutellum reaching at least to the base of the membrane, or at least half as long as the abdomen, sometimes covering the whole of the abdomen above and the anal appendages........................ **Pentatomidæ.**
   - B. Scutellum not reaching to the base of membrane, nor to middle of abdomen.
     - a. Mesopleuræ and metapleuræ composed of one piece only; hemelytron without a cuneus.
       - *a*. Tarsi three-jointed.
         - *a*¹. Rostrum not bent at the base, lying in repose against the under surface of the head.
           - *a*². Antennæ generally elongate and four-jointed, inserted on the upper parts of the sides of the head.
             - *a*³. Legs of moderate length; apices of femora not nodulosely clavate............... **Coreidæ.**
             - *b*³. Legs long and slender; apices of femora nodulosely clavate . **Berytidæ.**
           - *b*². Antennæ inserted below a line drawn from the centre of the eye to the apex of the face.
             - *a*⁴. Ocelli present .... **Lygæidæ.**
             - *b*⁴. Ocelli absent .... **Pyrrhocoridæ.**
         - *b*¹. Rostrum stout, bent at the base, so that in repose it does not lie against the under surface of head.
           - *a*². Rostrum long; ocelli placed between the eyes .... **Saldidæ.**
           - *b*². Rostrum short; ocelli, when present, placed behind the eyes.
             - *b*³. Hemelytra complete, membrane distinct .... **Reduviidæ.**

b^3. Hemelytra entirely membranaceous .... **Henicocephalidæ.**

b. Tarsi two-jointed.

a^1. Anterior legs normal.

a^2. Hemelytra more or less reticulate, consisting of strong irregular thick lines forming a framework of cells. Anterior legs inserted on the posterior margin of the prosternum...... **Tingididæ.**

b^2. Hemelytra neither reticulate nor cellular. Anterior legs inserted on the disk of the prosternum . **Aradidæ.**

b^1. Anterior legs short and stout, with long coxæ, short thick femora, and curvate pointed tibiæ; frequently without tarsi.................. **Phymatidæ.**

b. Mesopleuræ and metapleuræ composed of several pieces; hemelytron with a cuneus.

a. Hemelytron with an embolium.

a^1. Ocelli absent .... **Cimicidæ.**

b^1. Ocelli present.

a^2. Antennæ long and thin, clothed with long hairs; third and fourth joints together twice as long as the first and second .... **Ceratocombidæ.**

b^2. Antennæ not very thin, nor clothed with long hairs; third and fourth joints not nearly twice as long as the first and second...................... **Anthocoridæ.**

b. Hemelytron without an embolium.... **Capsidæ.**

2. Abdomen clothed beneath with a silvery velvety pubescence. (Species aquatic or subaquatic.)

A. Antennæ five-jointed .... **Hebridæ.**

B. Antennæ four-jointed.................. **Hydrometridæ.**

SERIES II. Antennæ concealed, either situate on the underside of the head to which they are closely pressed, or in foveæ under the head. (*Aquatic.*) **CRYPTOCERATA.**

A. Body short and broad; head very broad, with prominent eyes; ocelli present. Posterior legs thin, formed for running . **Pelegonidæ.**

B. Body elongate or ovate, head of moderate size.

a. Anterior legs inserted on disk of anterior margin of prosternum.

a. Antennæ with four joints; no anal appendix.

a^1. Posterior tibiæ spinulose .... **Naucoridæ.**

b^1. Posterior tibiæ flattened and provided with swimming-hairs...... **Belostomatidæ.**

b. Antennæ with three joints; abdomen with a long tubular appendix ...... **Nepidæ.**

b. Anterior legs inserted on the posterior margin of prosternum.
  a. Rostrum free, three to four-jointed .. **Notonectidæ.**
  b. Rostrum concealed, apparently unjointed .... **Corixidæ.**

Two families of Heteroptera are not included in the above synopsis. The fam. *Aëpophilidæ* is at present only represented by a single Western Palæarctic species, and therefore need not claim our attention. The *Polyctenidæ* include four or five species which have been found parasitic on Bats. Westwood treated them as aberrant Anoplura or Lice, while Dr. Sharp considers they should be included in the Heteroptera; but he adds that he has had no opportunity of making a thorough examination of *Polyctenes*, and therefore rightly speaks with some diffidence.

ERRATUM.

Page 395 top, *for* **Cletus caluminator** *read* **Cletus calumniator.**

Order RHYNCHOTA.

Suborder *HETEROPTERA.*

Family PENTATOMIDÆ.

The family Pentatomidæ is the largest in the Heteropterous Rhynchota, and some of its subfamilies are represented in all parts of the world where the Rhynchota exist. They are easily recognized insects, having a somewhat common facies, and comprise some of the best known and most haudsome species in the whole Heteroptera. It is probably owing to their conspicuous coloration that we know so much of the family as we do, collectors always sending specimens home with other insects. Of their habits much is still to be learned, and a knowledge of their life-histories during their incomplete metamorphoses will probably be of the greatest value to farmers and horticulturists. Many species possess a very pungent odour; but the purposes of this attribute are little understood, and await the explanation only to be obtained by systematic and detailed observation. Another feature, still unexplained, is the resplendent coloration of some species compared with the more modest aud dull appearance of many of their congeners. A theory of "warning colours" is usually proposed to account for such peculiarities, but this theory, or rather suggestion, still requires confirmation.

The structural characters of the Pentatomidæ have been well enumerated by Stål, and there is little to add to his diagnosis.

Head frequently clypeated. Antennæ three-, four-, or five-jointed, inserted on the lower side of the head below the lateral margins. Rostrum of four joints, inserted usually near the labrum towards the apex of the head, rarely towards the base of the same. Scutellum variable in size, very large or mediocre, reaching at least to the base of the membrane.

The number of subfamilies to be recognized is largely a matter of opinion. The latest standard publication is the Catalogue of Lethierry aud Severin (not yet completed), in which fifteen subfamilies are adopted, of which eleven are found in the fauna of

British India. This view I have followed, especially as the four excluded Neotropical divisions are those most open to controversy.

These subfamilies do not lend themselves with facility to the requirements of a synoptical key. It is a consensus of general characters rather than the prominence of a few peculiarities that nables these divisions to be recognized and maintained.

Synopsis of Subfamilies.

A. Hemelytra longer than the body, folded in at the base of membrane; head always clypeated .... *Plataspidinæ.*

B. Hemelytra straight, not folded in at base of membrane.

- a. Primary and subtended veins of wings remote, including a central broad area; hamus present.
  - *a.* Scutellum covering the whole of the hemelytra, excepting extreme base of outer margin .... *Scutellerinæ.*
- b. Primary and subcostal veins of wings usually conterminal and diverging at apex, somewhat parallel; hamus usually absent.
  - *b.* Scutellum large, but not covering the outer margin of corium .... *Graphosomatinæ.*
  - *c.* Scutellum of moderate size, corium always exposed.
    - *a'.* Basal ventral segment almost completely covered by the metasternum; scutellum variable in size and shape. *Cydninæ.*
    - *b'.* Spiracles of basal ventral segment hidden by posterior margin of metasternum.
      - a^2. Scutellum extending to about or beyond middle of abdomen, rarely shorter, if shorter the apex narrowed and only slightly or very slightly produced behind the frena; membrane moderate or small.
        - a^3. Tarsi with three joints.
          - a^4. Rostrum of variable size, but passing anterior coxæ.
            - a^5. Rostrum slender; basal joint not incrassated, nor inserted at labrum .... *Pentatominæ.*
            - b^5. Rostrum robust; basal joint incrassated, inserted at labrum .... *Asopinæ.*

b^4. Rostrum short, not passing anterior coxæ; basal joint of antennæ not reaching apex of head	*Phyllocephalinæ.*
c^4. Rostrum short, scarcely passing anterior coxæ; basal joint of antennæ much longer than head	*Urostylinæ.*
b^3. Tarsi with two joints	*Acanthosomatinæ.*
b^2. Scutellum never extending beyond middle of abdomen, its apex broad, membrane very large....	*Dinidorinæ.*
c'. Spiracles of basal ventral segment not hidden by metasternum	*Tessaratominæ.*

Subfamily I. PLATASPIDINÆ.

Plastipidæ, *Dall. List Hem.* i, p. 61 (1851).
Arthropteridæ, *Fieber, Eur. Hem.* pp. 27 & 379 (1861).
Arthropterida, *Stål, Hem. Afr.* i, p. 1 (1864).
Plataspidina, *Stål, Öfv. Vet.-Ak. Förh.* p. 611 (1870).
Plataspina, *Stål, En. Hem.* v, p. 3 (1876); *Atk. J. A. S. B.* lvi, p. 23 (1887).

Head clypeated: rostrum of four joints, inserted towards the base of the head, remote from the source of the labrum; scutellum very large, covering the entire abdomen; hemelytra longer than the body, with the apical half inwardly folded; longitudinal veins of the membrane simple; tarsi of two joints, the first joint very short.

The Plataspidinæ are absent from the Nearctic and Neotropical Regions, but are found in all other parts of the world; very sparingly indeed in the Palæarctic Region. They are common in the Ethiopian, and abundant in the Oriental Region. Then, again, they appear more sparingly in the Australian Region, and are probably represented throughout the islands of the Southern Seas. They comprise insects which are, according to present knowledge, of little injury to agriculture, for scarcely any mention is made of them in economic entomological reports, but little is recorded of their habits and life-histories, and our present information largely consists of names and localities.

Synopsis of Genera.

A. Ocelli nearer to each other than to the eyes.	
a. Anterior margin of pronotum concavely excavated	CODRONCHUS, p. 4.
b. Anterior margin of pronotum nearly straight	CRATOPLATYS, p. 5.

B. Ocelli either as far apart from eyes as from each other, or nearer to eyes than to each other.
- a. Head broad, with the eyes about reaching anterior angles of pronotum.
  - *a.* Head sexually diverse, in the ♂ produced anteriorly into two diverging processes .... TIAROCORIS, p. 14.
  - *b.* Head not sexually diverse.
    - *a'.* Lateral lobes of the head meeting in front of the central lobe.
      - *a*². Head broad and transversely truncated in front .... PONSILA, p. 7.
      - *b*². Head broad and rounded in front.. BRACHYPLATYS, p. 8.
    - *b'.* Lateral lobes of head not meeting in front of the central lobe .... FIEBERISCA, p. 16.
- b. Head broad, with the eyes almost but not quite reaching anterior angles of pronotum .... BOZIUS, p. 37.
- c. Head distinctly narrower than the anterior angles of pronotum.
  - *a.* Anterior margin of pronotum deeply concavely sinuate at insertion of head.
    - *a'.* Central lobe of head much shorter than the lateral lobes .... ONCYLASPIS, p. 7.
    - *b'.* Lobes of head almost equal in length .... VIGETUS, p. 13.
  - *b.* Anterior margin of pronotum not deeply sinuate.
    - *a'.* Central lobe of head distinctly elevated .... TROPIDOTYLUS, p. 36.
    - *b'.* Central lobe of head not elevated.
      - *a*². Lateral margins of pronotum strongly dilated .... TARICHEA, p. 6.
      - *b*². Lateral margins of pronotum not strongly dilated .... COPTOSOMA, p. 17.

Genus CODRONCHUS.

Codronchus, *Dist. A. M. N. H.* (7) viii, p. 233 (1901).

Type, *C. andamanensis*, Dist.

Distribution. Andaman Islands.

Somewhat broad and moderately convex. Head large, angulate, the central lobe very broad and ovate, a little shorter than the lateral lobes, which are divergent and do not meet in front; lateral margins moderately concave from base to about the region of the insertion of the antennæ and then oblique and reflexed to apex; eyes prominent; ocelli nearer to each other than to the eyes. Pronotum with the lateral margins convex, the anterior margin much excavated, nearly straight at the extreme base of head; the disk prominently transversely impressed; scutellum broad, not quite reaching the apex of the abdomen, its apex slightly concave; stigmata near the abdominal margin. Rostrum reaching the inter-

mediate coxæ. Antennæ five-jointed; a raised centrally hollowed and marginally ridged process between the intermediate and posterior coxæ.

Allied to *Cratoplatys* and *Heterocrates*.

1. **Codronchus andamanensis**, *Dist. A. M. N. H.* (7) viii, p. 233 (1901).

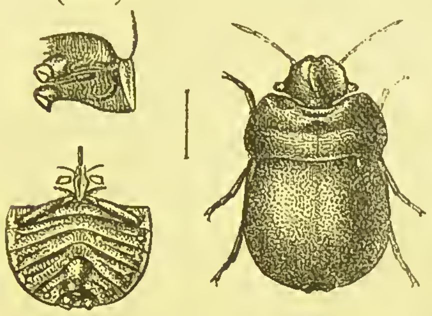

Fig. 1.—*Codronchus andamanensis*.

Black, very thickly punctate; eyes ochraceous, rostrum brownish-ochraceous; femora more or less castaneous. Head with an undulating transverse ridge between the eyes, and with a short waved basal ridge; pronotum with a patch of transverse striæ at centre of anterior margin, and with a broad central transverse impression on disk, the lateral margins convex and somewhat foliate; pronotum and scutellum with a faint central longitudinal ridge. Antennæ piceous, second joint shortest.

Length 8; max. breadth 5 millim.

Hab. Andaman Islands (*Coll. Dist.*).

Genus **CRATOPLATYS**.

Cratoplatys, *Montand. Ann. Mus. Civ. Genov.* xxxiv, p. 119 (1894).

Type, *C. gestroi*, Montand.

Distribution. Pegu.

As stated by its describer, *Cratoplatys* is allied to *Heterocrates*, *Handlirschiella*, and *Aphanopneuma*, and with them forms a distinct group, having the head very large, the ocelli less separated from each other than from the eyes, and the stigmata situated on the abdominal margin. It differs, however, from these three genera by its greater breadth of body, from *Heterocrates* and *Handlirschiella* by the nearly straight anterior margin of the pronotum, and from *Aphanopneuma* by the antennæ attenuated at the extremities, the third joint distinctly shorter than the first, and by the position of the ocelli, which are more separated from the eyes.

2. **Cratoplatys gestroi**, *Montand. Ann. Mus. Civ. Genov.* xxxiv, p. 120 (1894).

Black, shining; head with the margins of the central lobe, a transverse fascia on each side near base, and the ocelli ochraceous; pronotum with the lateral margins, a waved oblique linear fascia on the inner margins of the lateral expansions, and two anterior central spots ochraceous; scutellum with the margins and two

small spots near base ochraceous; the portion of the corium visible at the base of the scutellum also linearly marked with ochraceous: body beneath entirely black; a spot at the base of the head beneath, basal joint of the antennæ, and the rostrum ochraceous.

Fig. 2.—*Cratoplatys gestroi.*

Length $11\frac{1}{4}$; breadth $8\frac{3}{4}$ millim.

Hab. Pegu; Palon (*Fea*).

The type is an unique ♀ in the Genoa Museum, of which a drawing has been kindly sent to me by Dr. Gestro. The description is compiled from the diagnosis of Dr. Montandon and from the figure here reproduced.

Genus TARICHEA.

Tarichea, *Stål, Ann. Soc. Ent. Fr.* (4) v, p. 163 (1865).

Type, *T. chinensis*, Dall., a Chinese species.

Distribution. North India and China.

Body broad, ovate and very convex above, beneath flat. Head broad, its disk concave, before the eyes convexly rounded; lateral lobes meeting in front of the central lobe; eyes transverse; ocelli a little nearer to the eyes than to each other. Pronotum with the anterior lateral margins convexly dilated; scutellum reaching the apex of the abdomen. Legs short.

3. **Tarichea nitens,** *Dall.* (Plataspis) *List Hem.* i p. 74. 7 (1851); *Stål, En. Hem.* v, p. 6. 2 (1876).

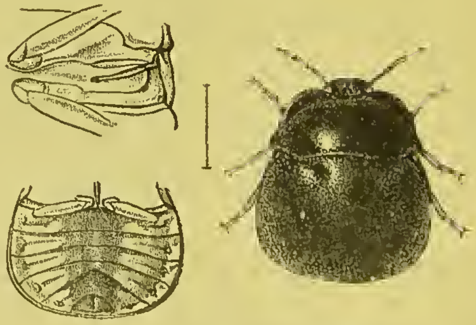

Fig. 3.—*Tarichea nitens.*

Above shining olivaceous-black; eyes, rostrum, antennæ, body beneath, and legs brownish-ochraceous, a broad central fascia to

abdomen olivaceous-black; sternum dull, opaque, piceous; apical joints of the antennæ piceous; head black beneath, with a basal ochraceous spot or patch. Finely and obscurely punctate.

Length 9; max. breadth 8 millim.

Hab. N.W. Himalaya (*Coll. Dist.*); N. India (*Brit. Mus.*).

Genus **ONCYLASPIS**.

Oncylaspis, *Stål, Hem. Afr.* i, p. 2 (1864); *En. Hem.* v, p. 4 (1876).

Type, *O. ruficeps*, Dall.

Distribution. Burma, Tenasserim.

Allied to *Tarichea.* Eyes transversely oblique; anterior lateral angles of the pronotum obtusely acute; head larger, more concave, lateral lobes meeting more widely in front of central lobe.

4. **Oncylaspis ruficeps**, *Dall.* (Plataspis) *List Hem.* i, p. 73. 5 (1851); *Stål, En. Hem.* v, p. 6 (1876).

Above shining black; head and anterior angles of the pronotum reddish-ochraceous; body beneath and legs reddish-brown or

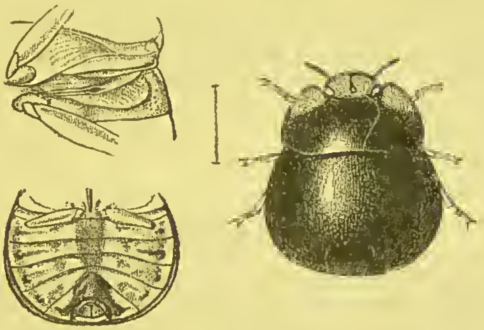

Fig. 4.—*Oncylaspis ruficeps.*

reddish-ochraceous, the anal area and central disk to abdomen black; sternum opaque.

Length 10; max. breadth 8 millim.

Hab. Burma; Karen Hills (*Doherty*). Tenasserim (*Brit. Mus.*).

Genus **PONSILA**.

Ponsila, *Stål, Öfv. Vet.-Ak. Förh.* 1858, p. 433; *Hem. Afr.* i, pp. 2 & 7 (1864).

Type, *P. luctans*, Stål, a West-African species.

Distribution. Tropical Africa and Oriental Region.

Body broadly ovate, above moderately convex. Head broad,

transverse, central lobe quite surrounded by the lateral lobes, which are longer; eyes moderately transverse; ocelli a little farther apart from each other than from eyes; pronotum with the anterior lateral margins a little ampliated.

5. **Ponsila montana,** *Dist. A. M. N. H.* (7) viii, p. 234 (1901).

Body above shining black; head in front of eyes, eyes, lateral margins and an oblique line joining subanterior margin of pronotum, lateral and posterior margins of scutellum and a small spot near each basal angle, head beneath, antennæ, lateral margins of sternum, rostrum and legs ochraceous; sternum piceous, opaque: abdomen mutilated; fourth and fifth joints of antennæ piceous. Head with the anterior area transverse, concavely excavated, the anterior angles obtusely prominent, the central lobe and anterior and lateral margins piceous; pronotum and scutellum thickly and finely punctate; pronotum with a somewhat obscure transverse impression on anterior area.

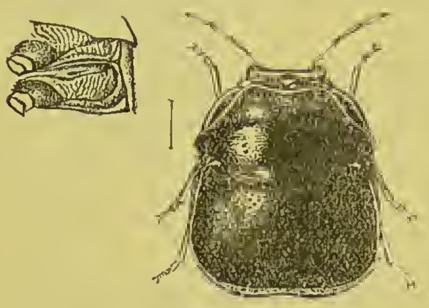

Fig. 5.—*Ponsila montana.*

Length $5\frac{1}{2}$; max. breadth 5 millim.

Hab. Nága Hills (*Doherty*).

Genus **BRACHYPLATYS.**

Coptosoma, subg. Platycephala, *Lap. Ess. Hem.* p. 73 (1832).
Brachyplatys, *Boisd. Voy. Astr., Ent.* ii, p. 627 (1835); *Dall. List Hem.* i, p. 61 (1851); *Stål, Hem. Afr.* i, p. 8 (1864); *id. En. Hem.* v, p. 4 (1876).

Type, *B. vanikorensis*, Boisd., from New Caledonia and adjacent islands.

Distribution. Oriental, Australasian, and Ethiopian Regions.

Body broadly ovate and generally slightly convex above, flat beneath; head foliaceous, transverse, broad, broadly rounded at the apex; vertex broader than the eyes; antennæ remote from the eyes, the first joint not longer than the third; eyes moderately transverse, not oblique, slightly immersed, prominent; ocelli a little farther from each other than from the eyes; pronotum about one-half broader than the head. As pointed out by Westwood, the scutellum in the ♂ is notched and in the ♀ entire.

I. Pronotum with ochraceous markings.

A. *Lateral margins of abdomen somewhat narrowly ochraceous.*

a. *Head distinctly spotted or marked with ochraceous.*

6. **Brachyplatys cingalensis,** *Stål, Öfv. Vet.-Ak. Förh.* 1855, p. 181; *op. cit.* 1856, p. 54; *Dist. A. M. N. H.* (7) iv, p. 214 (1899).
Brachyplatys silphoides, *Kirby* (*nec Fabr.*), *J. Linn. Soc., Zool.* xxiv, p. 79 (1891).

Olivaceous-black, shining; head with eyes and seven small spots (two on disk and five between eyes) ochraceous; pronotum with the lateral margins and an oblique linear fascia connected with the subanterior margin ochraceous; scutellum with the basal lateral margins and the basal margin of corium ochraceous. Head and abdomen beneath shining olivaceous-black; sternum opaque black; legs and rostrum brownish-ochraceous; extreme lateral margins of abdomen narrowly ochraceous, with a submarginal series of inwardly angulated ochraceous spots.

Length 8; max. breadth 7 millim.

Hab. Ceylon.

7. **Brachyplatys humeralis,** *Montand. Ann. Soc. Ent. Fr.* 1896, p. 446.

Black, shining, thickly and finely punctured; head with two small spots on the central lobe, on each side of the uppermost is a larger waved spot, on each side of the lowermost a transverse linear spot almost reaching eyes; sublateral margins of pronotum, also an oblique sublateral linear fascia connected with the subanterior margin, and a perpendicular linear spot near each lateral angle, four small spots on basal margin of scutellum, the outermost linear and almost connected with a narrow lateral and posterior margin, ochraceous. Body beneath black, the head and sternum opaque, the abdomen shining; central area of head, rostrum, and legs ochraceous; lateral margins of abdomen ochraceous, strongly notched anteriorly, with a sublateral series of linear black spots and a smaller inner series of black spots, one on each alternate notch.

Length $7\frac{1}{2}$; breadth between pronotal angles 5 millim.

Hab. North India.

b. *Head entirely or almost entirely black and unspotted.*

8. **Brachyplatys pauper,** *Voll. Faun. Ind. Néerl.* i, p. 54 (1863).

Above shining black; head almost entirely black, sometimes exhibiting three small ochraceous spots; pronotum with the sublateral margins and a small linear streak at the lateral angles ochraceous; scutellum with the lateral and posterior margins very narrowly ochraceous: body beneath shining black, sternum opaque;

legs, rostrum, antennæ, and lateral margins of abdomen arranged in a double row of small irregular spots, ochraceous; apical joint of antennæ piceous.

Length 4 to 5; max. breadth 4 millim.

Hab. Ceylon (*Lewis*). Andaman Islands; Port Blair (*Meldola*).—Also generally distributed throughout the Malayan Archipelago.

B. *Lateral margins of abdomen with ray-like fasciæ.*

a. *Head distinctly spotted or marked with ochraceous.*

9. **Brachyplatys vahlii**, *Fabr.* (Cimex) *Mant.* ii, p. 283. 32 (1787); *Coq.* (Cimex) *Ill.* ii, p. 79, t. 18, f. 14 (1801); *Fabr.* (Tetyra) *Syst. Rhyng.* p. 142. 69 (1833); *Germ.* (Thyreocoris) var. *Zeitschr.* i, p. 33. 23 (1839); *Amy. & Serv.* (Plataspis) *Hém.* p. 64. 2 (1843); *Stål, En. Hem.* v, p. 7 (1876).
Brachyplatys continua & frontalis, *Wlk. Cat. Het.* i, pp. 104, 106 (1867).

Black, shining; eyes and two transverse lines (sometimes much broken) on the head, the sublateral margins of the pronotum, and an oblique sublateral fascia connected with the subanterior margin, lateral and posterior margin of scutellum, ochraceous; some specimens have two small ochraceous spots on the disk of the pronotum, and two similar spots at the base of the scutellum. Head and sternum beneath opaque black; abdomen beneath shining black; central area of head beneath, legs, lateral margins of abdomen and broad ray-like fasciæ on each abdominal segment ochraceous, these fasciæ contain a short central black line, and there is also a lateral submarginal series of small black spots; antennæ piceous, with their bases ochraceous.

Length 7 to 8; max. breadth 6 millim.

Hab. Sikhim (*Anderson*); North Khási Hills (*Chennell*); Bombay (*Coll. Dist.*). Burma (*Brit. Mus.*).—Also found in the Malay Peninsula, and generally throughout the Malayan Archipelago.

10. **Brachyplatys radians**, *Voll. Faun. Ind. Néerl.* i, p. 53. 2, pl. iv, f. 7 (1863).
Var. Brachyplatys vahlii, *Voll.* (*nec Fabr.*) *loc. cit.* p. 52. 1.

Closely allied to the preceding species (*B. vahlii*, Fabr.), but differing principally by the shape and length of the ray-like ochraceous fasciæ to the abdomen beneath, which are shorter, narrower, much more acute, and do not contain the central black line.

Length 6 to 7; max. breadth 5 millim.

Hab. Andaman Islands.—This species is probably found throughout the Malayan Archipelago; it has been received from Celebes and the Philippines.

11. **Brachyplatys subaëneus**, *Westw.* (Plataspis) *in Hope Cat. Hem.* i, p. 17 (1837); *Dall. List Hem.* i, p. 70. 9 (1851); *Dist. A. M. N. H.* (7) iv, p. 213 (1899).
Thyreocoris septus, *Germ. Zeitschr.* i, p. 32. 19 (1839).
Brachyplatys bistriga, cambodica, cognata, adjuncta, & contigua, *Walk. Cat. Het.* i, pp. 100–103 (1867).

Closely allied to the preceding species (*B. radians*, Voll.), but differing in having the ray-like fasciæ to the lateral margins of the abdomen beaneath very short and conical.

Length 6 to 7; max. breadth 5 to $5\frac{1}{2}$ millim.

Hab. North Bengal and Calcutta (*Brit. Mus.*). Sikhim; Mungphu (*Atkinson*). Mysore; Bangalore. Ceylon (*Green*). Andaman Islands (*Coll. Dist.*). Burma; Bhamo, Teinzo, Metanja (*Fea*). Tenasserim; Meetan (*Doherty*).—Also recorded from Malacca, Siam, Cambodia, Cochin China, Annam, Tonkin, Formosa, China, and several islands of the Malayan Archipelago.

12. **Brachyplatys punctipes**, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 122 (1894).

Above shining olivaceous-black, thickly and finely punctate; head with six small ochraceous spots, two on disk and two before each eye; pronotum with the sublateral margins and an oblique line on each submarginal area uniting with the subanterior margin ochraceous; scutellum with the lateral and posterior margins narrowly ochraceous, and with four small ochraceous spots at base (two on each side); base of corium with the sublateral margin also ochraceous. Head beneath and sternum piceous, opaque; abdomen shining olivaceous-black; lateral margins of the abdomen and a series of long ray-like fasciæ directed inwardly ochraceous; the rays are divided or semidivided by a median black line, and the lateral margin possesses a series of small black spots; legs and rostrum ochraceous, the femora distinctly spotted with brownish; antennæ piceous, the bases and apices of the apical joints very narrowly ochraceous.

Length 7 to 9; max. breadth 5 to 7 millim.

Hab. Punjab (*Brit. Mus.*). Trichinopoly (*Brit. Mus.*). Burma; Karennee (*Fea*).—Also China.

13. **Brachyplatys carolinæ**, *Atk. J. A. S. B.* lvii, p. 341 (1888); *Dist. A. M. N. H.* (7) iv, p. 214 (1899).
Brachyplatys silphoides, *Dall.* (*nec Fabr.*) *List Hem.* i, p. 71. 13 (1851); *Wlk. Cat. Het.* i, p. 100. 9 (1867).

Somewhat closely allied to *B. punctipes*, Montand. Head with six small ochraceous spots, but arranged in conical series, the two basal spots on each side perpendicular to each other, not parallel

as in *B. punctipes*. Ochraceous markings to pronotum less distinct.

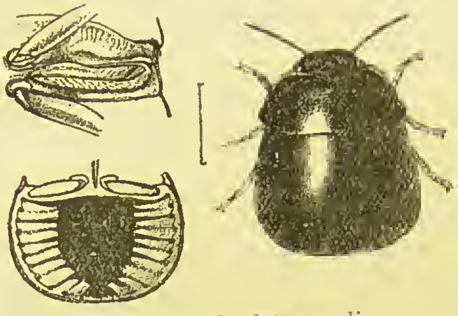

Fig. 6.—*Brachyplatys carolinæ.*

Length 10; max. breadth $7\frac{1}{2}$ millim.
Hab. Sikhim; Mungphu (*Atkinson*).

14. **Brachyplatys silphoides**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 86. 24 (1794); *Fabr.* (Tetyra) *Syst. Rhyng.* p. 141. 62 (1803); *Stål, Hem. Fabr.* i, p. 5. 2 (1868); *Dist. A. M. N. H.* (7) iv, p. 214 (1899).
Brachplatys liturifrons, *Walk. Cat. Het.* i, p. 102. 22 (1867).

Allied to the preceding species (*B. punctipes* and *B. carolinæ*), but narrower, lateral margins more parallel, the ochraceous ray-like fasciæ to the abdomen beneath much shorter. Head with a small anteriorly lanceolate fascia on central lobe, on each side of which is a transverse subanterior lateral fascia, and a linear transverse fascia at inner margins of eyes, ochraceous.

Length 6 to 7; max. breadth $4\frac{1}{2}$ to $5\frac{1}{2}$ millim.

Hab. India (no precise locality).—The distribution of this species is at present very difficult to trace, owing to the various species wrongly identified under its name. It is certainly known from Borneo.

II. Pronotum and head without ochraceous markings.

A. *Lateral margins of abdomen with ray-like fasciæ.*

15. **Brachyplatys burmeisteri**, *Dist. A. M. N. H.* (5) iii, p. 46 (1879).
Thyreocoris silphoides, *Burm.* (*nec Fabr.*) *Handb.* ii, p. 384. 3 (1835).

Can be at once distinguished from *B. vahlii*, Fabr., and *B. silphoides*, Fabr., by its uniform coloration above, and absence of luteous markings on the head and pronotum; the luteous abdominal radial streaks are much as in *B. radians*, Voll.

Length 6 to 8; max. breadth 5 to 6 millim.

Hab. Assam; Noa-Dehing Valley and Sadiya (*Chennell*).—Also received from Penang and from Java.

B. *Lateral margins of abdomen somewhat narrowly ochraceous.*

16. **Brachyplatys funebris**, *Dist. A. M. N. H.* (7) viii, p. 235 (1901).

Above black, moderately shining with a dull olivaceous hue; eyes castaneous; head beneath and sternum black opaque; abdomen beneath shining olivaceous-black; central area of head beneath, extreme lateral margins of pronotum both above and beneath, extreme lateral and apical margins of scutellum and abdomen ochraceous; lateral margins of abdomen beneath ochraceous, notched internally and containing a submarginal series of black spots; legs castaneous, the femoral apices, tibiæ, and tarsi brownish-ochraceous; antennæ and rostrum brownish-ochraceous. Body above thickly and finely punctate.

Length 8 to 9; max. breadth 7 to 8 millim.

Hab. Assam; Sadiya (*Chennell*).

Genus VIGETUS.

Vigetus, *Dist. A. M. N. H.* (7) viii, p. 234 (1901).

Type, *V. typicus*, Dist.

Distribution. At present known only from Assam.

Body broad, convex above. Head broad, short, deeply inserted in the pronotum, concave from between the region of the eyes, on the inner margin of which is a short distinct transverse ridge; anterior margin very slightly rounded, the lobes about equal in length, or central lobe slightly shortest; eyes moderately transverse; ocelli nearer to the eyes than to each other. Pronotum

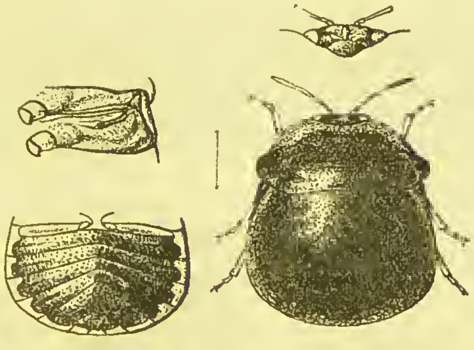

Fig. 7.—*Vigetus typicus.*

convex, the anterior lateral margins convexly rounded and moderately laminately produced, the lateral angles distinctly nodulose; anterior margin concavely excavated for the reception of the head; posterior margin nearly straight. Scutellum broad, about completely covering the abdomen, its apex distinctly concavely excavated in the male. Rostrum apparently reaching the

intermediate coxæ. Antennæ with the second joint very short. Odoriferous apertures very broad and obliquely striate.

17. **Vigetus typicus,** *Dist. A. M. N. H.* (7) viii, p. 235 (1901).

Above shining olivaceous-black; thickly, finely, but obscurely punctate; eyes luteous; base of lateral margin to corium ochraceous. Head beneath and sternum black, opaque; abdomen shining black; legs piceous, apices of femora, tibiæ and tarsi brownish-ochraceous; lateral margins of the abdomen ochraceous, inwardly angulated. Antennæ ochraceous; fourth joint piceous (remainder mutilated).

Length ♂ & ♀ 5 to 6; max. breadth $4\frac{1}{2}$ to $5\frac{1}{2}$ millim.

Hab. Assam; Margherita (*Doherty*).

Genus **TIAROCORIS**.

Tiarocoris, *Voll. Faun. Ind. Néerl.* i, p. 51 (1863).

Type, *T. sumatranus*, Voll., a Sumatran species.

Distribution. Oriental Region.

Body large and concave; head large, the lateral lobes meeting in front of the central lobe in the female, but produced in two large diverging processes in the male; antennæ five-jointed, the second joint very small; rostrum reaching the first abdominal segment; scutellum covering the abdomen and the corium, the second only exposed at base; apex of scutellum concavely excavated in the male.

18. **Tiarocoris contestatus,** *Montand. Ann. Soc. Ent. Belg.* xxxvii, p. 561 (1893).

♀. Head pale brownish-ochraceous, the margins and central lobe darker, eyes castaneous; pronotum ochraceous, glabrous, a very broad basal fascia not quite reaching lateral angles, two transverse waved fasciæ on anterior area, and an oblique spot near lateral angles, castaneous, anterior margin and an oblique sublateral line piceous;

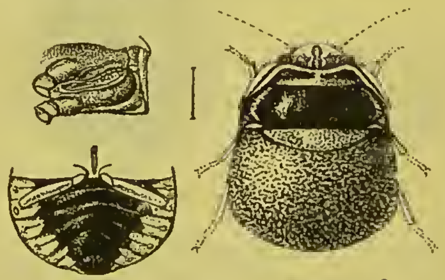

Fig. 8.—*Tiarocoris contestatus*, ♀.

scutellum ochraceous, thickly, coarsely, and darkly punctate, a basal patch convexly margined with a piceous line, paler and more finely punctate. Abdomen beneath, meso- and metasterna black; head

beneath, prosternum, lateral margins and posterior angles of meso- and metasterna, rostrum, legs, and broad ray-like marginal fasciæ to abdomen, ochraceous; apex of rostrum piceous.

Length 5; max. breadth 4 millim.

Hab. Burma; Shan Yoma.

19. **Tiarocoris consertus**, *Dist. A. M. N. H.* (7) viii, p. 235 (1901).

♀. Head ochraceous, the margins, margins of central lobe, an oblique line a little in front of eyes, and the basal margin piceous; pronotum with the anterior area ochraceous, glabrous, containing two large transverse discal black spots, the anterior margin black and an inner linear series of black punctures to the dilated anterior margins, posterior area ochraceous, thickly covered with very coarse black punctures, the apical margin and basal circumscribed area much more sparingly punctate; sternum piceous, opaque; abdomen shining black. Head beneath, prosternum, legs, antennæ, rostrum, abdominal margin, and two ray-like fasciæ at apex of each abdominal segment, ochraceous; antennæ with the fourth and fifth joints piceous.

Length ♀ 5; max. breadth $4\frac{1}{2}$ millim.

Hab. Burma; Ruby Mines (*Doherty*).

Distinguished from the preceding species (*T. contestatus*, Montand.) by the punctate and not black posterior area of the pronotum, by the sparsely punctate apical margin of the scutellum, longer ray-like fasciæ to the abdomen, &c.

20. **Tiarocoris luminatus**, *Montand. Rev. d'Ent.* 1892, p. 307; *Ann. Soc. Ent. Belg.* xxxvii, p. 560 (1893).

♀. Above black, shining; anterior area of the head from between eyes almost wholly ochraceous; pronotum with the lateral margins, broadly, and the angles of the anterior margin ochraceous, with coarse scattered black punctures, an inner oblique dividing line of black punctures at the anterior dilated margins, a black spot at each lateral angle; scutellum with the lateral and apical margins narrowly joined to an oblique spot near each basal angle ochraceous, the last distinctly punctured with black; connexivum ochraceous; sternum piceous, opaque; abdomen black, shining. Head beneath, anterior areas of prosternum, antennæ, rostrum, legs, lateral margins of the abdomen, and two ray-like fasciæ at the apex of each abdominal segment, ochraceous.

Length $4\frac{1}{2}$; max. breadth 4 millim.

Hab. Burma; Ruby Mines (*Doherty*).—The type was described from Malacca.

21. **Tiarocoris signatus**, *Dist. A. M. N. H.* (7) viii, p. 236 (1901).

♀. Ochraceous, reticulately marked with piceous. Head ochraceous; anterior margin, margins of central lobe, and central basal margin narrowly piceous; eyes pale castaneous; pronotum

with the anterior area ochraceous, levigate, with an oblique fascia of black punctures on each anterior lateral area, and with a similar fascia obliquely extending from each lateral angle and united with a transverse fascia—centrally broken—across anterior disk, remaining area somewhat thickly reticulately marked with piceous; scutellum thickly reticulately marked with piceous, with a distinct black arcuated spot behind the basal transverse elevation. Body beneath piceous; head beneath, prosternum, legs, rostrum, abdominal margins and inner ray-like fasciæ, ochraceous; antennæ piceous, first and second joints ochraceous.

Length 6; max. breadth 4 millim.

Hab. Ceylon (*G. Lewis*).

Genus FIEBERISCA.

Fieberisca, *Montand. Ann. Soc. Ent. Belg.* xl, p. 98 (1896).

Type, *F. ornata*, Montand.

Distribution. At present only reported from India, and from no precise locality.

According to Montandon this genus comes between *Coptosoma* and *Tiarocoris*. It is allied to the last-named genus by the shape and size of the head, the flattened abdomen beneath, and by the length of the odoriferous apertures; but it differs in the form of the dilated lateral margins of the pronotum and in the transverse impression on the same, which is irregular and interrupted on the disk.

22. **Fieberisca ornata,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 99 (1896).

Head ochraceous, the margins, a central spot on each side of which is a transverse line, and a basal series of spots castaneous; pronotum castaneous, two large ochraceous transverse spots on

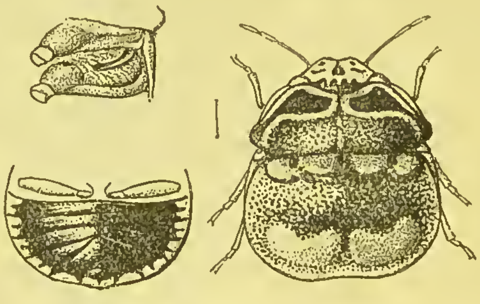

Fig. 9.—*Fieberisca ornata.*

anterior area continued to lateral angles, the whole inner areas of which are black, a somewhat faint central median ochraceous line; scutellum castaneous; four irregular basal spots and two large transverse arcuate subapical spots, ochraceous; lateral and apical

margins ochraceous punctured with castaneous. Head beneath, prosternum, rostrum, and legs ochraceous; abdomen beneath shining piceous, with a marginal series of angulated ochraceous spots; antennæ ochraceous, apical joint castaneous.

Length 4; max. breadth $3\frac{1}{2}$ millim.

Hab. "India" (*Mus. Paris.*).

I am indebted to Prof. Bouvier for the opportunity of figuring and describing the unique type.

Genus COPTOSOMA.

Coptosoma, subg. Coptosoma, *Lap. Ess. Hem.* p. 73 (1832).
Globocoris, *Hahn, Wanz.* ii, p. 40 (1834).
Coptosoma, *Dall. List Hem.* i, p. 61 (1851); *Stål, Hem. Afr.* i, pp. 1 & 9 (1864); *Atk. J. A. S. B.* lvi, p. 30 (1887).

Type, *C. globus*, Fabr. A Palæarctic species.

Distribution. Distributed throughout the Old World, but not found on the American continent.

Body broadly ovate, above moderately convex, flat or very slightly convex beneath; head usually small, deflexed, narrower than the pronotum; eyes moderately prominent; ocelli nearer to the eyes than to each other; antennæ inserted at the eyes; lateral margins of pronotum posteriorly sinuate before the sinus, generally distinctly ampliated and foliaceous; scutellum moderately broadened posteriorly; feet rather short.

This is a very large and unwieldy genus, but it is a homogeneous one, and though we may make sections of it they are superficial and do not lead to subgeneric division. I am now able to enumerate no fewer than 51 species belonging to this fauna.

I. Head short, broad, moderately rounded between the eyes.

A. *Pronotum with lateral margins much dilated, distinctly emarginate in front of lateral angles.*

23. **Coptosoma ceylonicum**, *Dohrn, Stett. ent. Zeit.* xxi, p. 399 (1860).

Head black with a central ochraceous basal spot, eyes castaneous; pronotum and scutellum ochraceous, pronotum with nearly the basal half and scutellum, excluding the basal callosities, coarsely punctured with brown; pronotum with a short sublateral fascia to dilated anterior margin, a central linear fascia not quite reaching basal margin, an oblique linear fascia on each side commencing near lateral angle and connected with the apices of a sinuate fascia situate a little before anterior margin, and the posterior margin, black; scutellum with the margins of the basal callosity, a short central longitudinal basal fascia, and the lateral and apical margins, black. Body beneath black; antennæ, rostrum,

legs, lateral margins of the sternum and abdomen ochraceous, the last broad and containing a series of black spots.

Length 4½ to 5; max. breadth 4½ to 5 millim.

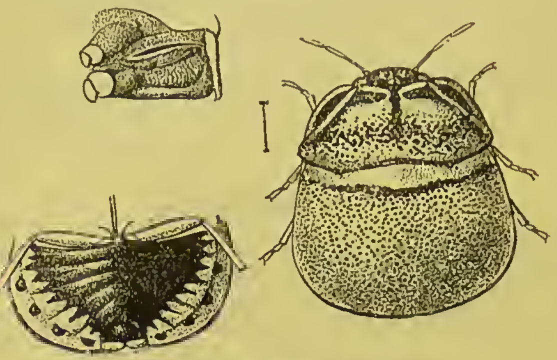

Fig. 10.—*Coptosoma ceylonicum.*

Hab. Ceylon (*Green* and *Lewis*).

24. **Coptosoma rugulosum,** *Dist. A. M. N. H.* (7) iv, p. 216 (1899).

Ochraceous, thickly, irregularly, and somewhat confluently covered with coarse reticulated black punctures; head with the central lobe distinctly margined with black punctures; eyes testaceous; pronotum with the anterior margin concave, the anterior angles dilated, rounded, and moderately laminate, the lateral margins slightly sinuate, transverse furrow only slightly indicated; scutellum without perceptible transverse basal furrow. Body beneath very dark dull olivaceous; abdomen with a marginal series of about three rows of small dark ochraceous spots; legs dark castaneous, femora streaked with ochraceous; head beneath ochraceous at base.

Length 6; max. breadth 5 millim.

Hab. Ceylon (*Atkinson Coll., Brit. Mus.*).

25. **Coptosoma cicatricosum,** *Dall. List Hem.* i, p. 66. 13 (1851).

Black, shining, thickly and finely punctate; head rugose, eyes red; pronotum with the lateral margins much dilated, distinctly emarginate in front of the lateral angles, a strong transverse punctured impression across the anterior disk; scutellum with a well-defined very slightly elevated basal callosity, the whole surface covered with smooth, reddish, elevated spots, with the interstices thickly punctured. Body beneath black, shining, the sternum opaque; legs black; rostrum dark castaneous with the apex black.

Length 6; max. breadth 6 millim.

Hab. "North India" (*Boys Coll., Brit. Mus.*).

26. **Coptosoma priscum,** *Dist. A. M. N. H.* (7) viii, p. 236 (1901).

Shining black above; head with the anterior halves of the lateral lobes more or less ochraceous; pronotum with the anterior lateral margin and a marginal line near lateral angles, an irregular transverse series of markings across anterior disk, a similar oblique series on anterior lateral dilatations, and two spots on anterior margin, ochraceous; scutellum with the base and lateral areas mottled with ochraceous. Body beneath black, the sternum opaque, the abdomen shining; legs, lateral margins, and a small angulated spot at the apex of each abdominal segment, ochraceous; antennæ piceous.

Length 5; max. breadth 5 millim.

Hab. Assam; Margherita (*Doherty*).

B. *Pronotum with the lateral margins neither strongly dilated nor emarginate.*

a. *Scutellum without a distinct transverse basal callosity.*

27. **Coptosoma duodecimpunctatum,** *Germ.* (Thyreocoris) *Zeitschr.* i, p. 30 (1839); *Herr.-Schäff.* (Thyreocoris) *Wanz. Ins.* v, p. 14, t. 150. f. 474 (1839); *Dall. List Hem.* i, p. 62 (1851); *Stål, En. Hem.* v, p. 10 (1876); *Atk. J. A. S. B.* lvi, p. 30 (1887).

Body above brassy-black; eyes, lateral margins of pronotum, a sublateral marginal line to scutellum, eight spots on pronotum—four at anterior, one on each lateral margin, and two on disk—and four basal spots to scutellum reddish-ochraceous. Body beneath black; the head and sternum opaque, the abdomen moderately shining; antennæ, rostrum, and legs brownish-ochraceous; bases of femora, apices of antennæ, and rostrum piceous; lateral margins of abdomen broadly ochraceous, inwardly bidentate on each segment and with large black stigmatal spots.

Length 6 to 7; max. breadth $5\frac{1}{2}$ to $6\frac{1}{2}$ millim.

Hab. Sikhim; Khási Hills (*Chennell*); Cachar (*Coll. Dist.*); Barwai and Burhanpur (*Brit. Mus.*). Pegu, Palon (*Fea*).—Also found in the Malay Peninsula: Perak; Penang.

28. **Coptosoma denticeps,** *Montand. Rev. Ent. Franç.* 1893, p. 227.

This species, as stated by Montandon, is nearly identical with the preceding species (*C. duodecimpunctatum*, Germ.) in shape, markings, and colour. The punctuation, however, is stronger and more dense on the upper surface, the lateral margins of the pronotum more dilated, and, above all, the head possesses a distinct tooth in front of each eye.

Length 5; max. breadth $4\frac{1}{2}$ millim.

Hab. "India" (*Montand. Coll., Brit. Mus.*).

29. **Coptosoma lethierryi**, *Montand. Rev. Ent. Franç.* 1892, p. 284.

Uniform indigo-black above, shining; eyes brownish-ochraceous; basal margin of corium and connexivum reddish-ochraceous: body beneath shining indigo-black, opaque on sternum and underside of head; lateral margins of metasternum and abdomen—the latter inwardly toothed on each segment—reddish-ochraceous; antennæ and legs brownish-ochraceous, the femora more or less piceous.

Length $4\frac{3}{4}$ to 5; max. breadth 4 to $4\frac{1}{2}$ millim.

Hab. Sikhim; Mungphu (*Coll. Lethierry*). Burma; Karennee (*Fea*).

30. **Coptosoma modigliani**, *Montand. Ann. Mus. Civ. Genov.* xxxiii, p. 296 (1893).

Dark blackish-castaneous, shining; anterior lateral dilated margin of pronotum ochraceous with a central piceous line; eyes and four spots to pronotum (two on anterior area and one near each lateral angle) brownish-ochraceous; scutellum without a basal callosity, but narrowly brownish-ochraceous on each basal area, where there is an included dark spot; basal margin of corium and an intramarginal line to scutellum ochraceous. Body beneath dark castaneous, the abdomen shining, the sternum opaque; lateral margins of prosternum largely ochraceous; antennæ, rostrum, and legs brownish-ochraceous, extreme femoral bases piceous; abdominal margin and small spots at apex of each segment ochraceous: these spots double on the second, third, and fourth segments, single and smaller on the fifth and sixth segments.

Length $3\frac{1}{2}$ to 4; max. breadth 4 to $4\frac{1}{4}$ millim.

Hab. Burma; Shan Yoma (*Montand. Coll., Brit. Mus.*).—Originally received from the Island of Engaño.

b. *Scutellum with a distinct basal callosity.*

31. **Coptosoma distanti**, *Montand. Ann. Soc. Ent. Belg.* xxxvii, p. 564 (1893).

Shining bronzy-black; anterior half of head, lateral margins of pronotum (very broad at lateral angles), a spot at each apex of basal callosity, and the lateral and apical areas of scutellum ochraceous; a sublateral row of dark punctures in the anterior lateral pronotal dilatations, the ochraceous markings at lateral angles of pronotum and those on the scutellum thickly and darkly punctate; anterior margin of head narrowly black, margins of central lobe piceous; sternum opaque black; abdomen shining black. Head beneath rostrum, antennæ, lateral margins of sternum, legs, lateral abdominal margin, and a long spot occupying about apical third of each abdominal segment, ochraceous.

Var. Ochraceous lateral areas of the scutellum broken centrally by the black ground-colour.

Length $3\frac{3}{4}$ to 4; max. breadth $3\frac{3}{4}$ to 4 millim.

Hab. Nága Hills (*Doherty*).—Also found in Tibet, Mou-Pin, by Père David.

32. **Coptosoma contectum**, *Montand. Ann. Soc. Ent. Belg.* xxxvii, p. 567 (1893).

Black, shining; head with a spot at base of central lobe and the anterior area from about between eyes more or less ochraceous; pronotum with the anterior dilated lateral margins and an inner oblique line reaching the lateral angles ochraceous; scutellum with the margins very narrowly ochraceous; sternum piceous, opaque; abdomen shining black. Head beneath, lateral margins of sternum, antennæ, rostrum, legs, lateral margins of abdomen, a double longitudinal series of linear spots at apices of second, third, and fourth abdominal segments, and a single similar spot on each of the remaining segments, ochraceous.

Length 4; max. breadth 4 millim.

Hab. Sikhim; Kurseong (*Montand. Coll.*, *Brit. Mus.*).

33. **Coptosoma varium**, *Montand. Ann. Soc. Ent. Belg.* xxxvii, p. 565 (1893).

Head ochraceous, the basal area black; pronotum and scutellum black with a central discal spot, the anterior dilated margins connected with a large subquadrate spot at lateral angles; scutellum with the basal callosity, the lateral and apical margins, a large spot near each basal angle, and two large subquadrate spots connected with apical margin, ochraceous punctured with brown. Body beneath black, the sternum opaque; head beneath, rostrum, antennæ, legs, lateral margins of sternum and abdomen, and a long, blunt, ray-like fascia, with a central darker line, from apex of each abdominal segment, ochraceous; fourth and fifth joints of antennæ and apex of rostrum infuscated.

Length 4; max. breadth 4 millim.

Hab. Burma; Ruby Mines (*Doherty*).

II. Head large, obtuse, subsemicircular in front of eyes.

A. *Apices of lateral lobes of head not entirely meeting in front of central lobe.*

34. **Coptosoma ramosum**, *Walk. Cat. Het.* i, p. 93 (1867); *Dist. A. M. N. H.* (7) iv, p. 216 (1899).
Coptosoma loriæ, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 415 (1895)

Above shining black; head with a broad marginal fascia on each lateral lobe, pronotum with the dilated anterior marginal areas (containing a central black line), two transverse spots near

anterior margin with a smaller spot behind each, some indistinct transverse discal markings, and an oblique spot near each lateral angle, ochraceous; scutellum with two large transverse spots in the basal callosity (each with a central blackish spot), a small spot before each basal angle, and some scattered discal markings, of which there is a central apical more or less longitudinal spot, ochraceous. Body beneath black, the sternum opaque; antennæ, rostrum, legs, inner lateral prosternal margins, and an irregular double series of marginal abdominal spots, ochraceous.

Length 5; max. breadth 5 millim.

Hab. Andaman Islands (*Coll. Dist.*).—Originally received from New Guinea.

35. **Coptosoma saniosum**, *Dist. A. M. N. H.* (7) viii, p. 237 (1901).

Ochraceous, somewhat thickly punctured and mottled with dark castaneous; head with the base and margins of central lobe piceous; eyes and ocelli pale castaneous; pronotum with the anterior third separated by a distinct transverse impression, within which are two discal angulated piceous lines, a submarginal line in anterior lateral margins, and a narrow anterior submarginal line, piceous; a central pale line extends through the pronotum and basal callosity of the scutellum. Body beneath black, the sternum opaque, the abdomen shining; head beneath brownish-ochraceous; lateral margins of sternum and lateral pronotal dilatations, antennæ, legs, rostrum, abdominal lateral margins, and a long ray-like fascia—the centre of which is black—on each segment, ochraceous.

Length 5; max. breadth 5 millim.

Hab. Tenasserim; Myitta (*Doherty*).

B. *Apices of lateral lobes of head completely meeting in front of central lobe.*

a. *Abdomen with long ray-like marginal spots.*

36. **Coptosoma cribrarium**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 531 (1798); *id.* (Tetyra) *Syst. Rhyng.* p. 143 (1803); *Burm.* (Thyreocoris) *Handb.* ii (1), p. 384 (1835); *Amy. & Serv. Hém.* p. 66, t. 2, f. 4 (1843); *Stål, En. Hem.* v, p. 12 (1876); *Atk. J. A. S. B.* lvi, p. 31 (1887); *Dist. A. M. N. H.* (7) iv, p. 215 (1899).
Coptosoma atomarium pt., *Voll. Ind. Néerl.* p. 50 (1863).
Coptosoma xanthochlora, *Walk. Cat. Het.* i, p. 87 (1867).

Ochraceous- or greenish-yellow, somewhat thickly covered with prominent dark brown punctures; head with the margins of the central lobe and an oblique spot behind each eye piceous, eyes pale castaneous; pronotum with the basal and broadest area distinctly defined by a transverse series of coarse punctures, the anterior area is very much less punctate, contains two discal

transverse angulated striæ, and a sublateral series of punctures in each anterior lateral dilatation; scutellum with the basal callosity well-defined by a marginal impression, and connected on each side with the lateral margin by a continuous linear series of punctures. Body beneath black, the sternum opaque, the abdomen shining; head beneath, lateral margins of sternum, antennæ, rostrum, coxæ,

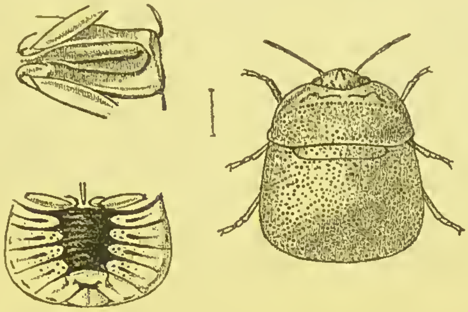

Fig. 11.—*Coptosoma cribrarium.*

legs, lateral abdominal margins, and a long ray-like fascia on each additional segment—each of these fasciæ containing a central black line—ochraceous.

Length $4\frac{1}{4}$ to 5; max. breadth 4 to $4\frac{1}{2}$ millim.

Hab. Calcutta; Bombay; Barwai; Burhanpur; Bangalore; Nilgiri Hills; Nága Hills. Burma; Metanja, Swegu, Bhamo (*Fea*). Tenasserim.—Also received from China and Formosa.

37. **Coptosoma sparsum**, *Montand. Ann. Soc. Ent. Belg.* xxxviii, p. 257 (1894).

Pale ochraceous, somewhat uniformly punctured with brown.

Closely allied to *C. cribrarium* (Fabr.), but differing by the absence of the dark transverse markings to the anterior disk of the pronotum, and also by the absence of the distinct impressed margin to the basal callosity of the scutellum.

Length $3\frac{1}{4}$; max. breadth $3\frac{1}{4}$ millim.

Hab. Central India; Barwai (*Montand. Coll., Brit. Mus.*).

38. **Coptosoma nilgirense**, *Dist. A. M. N. H.* (7) viii, p. 238 (1901).

Dull opaque ochraceous, very sparingly and irregularly punctate; head impunctate; pronotum with the anterior, lateral, and basal areas impuuctate, the punctures being sparingly distributed on the disk; scutellum very sparingly punctate, a longitudinal space on each side of base impunctate.

Other characters as in *C. cribrarium* (Fabr.).

Length 5; max. breadth 4 millim.

Hab. Nilgiri Hills (*Hampson*).

39. **Coptosoma pravum,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 106 (1896).

Ochraceous, punctured and reticulated with dark castaneous; head with the central lobe and base castaneous; pronotum with the anterior third impunctate, containing two sub-connected angulated fasciæ on disk and a central series of punctures in the anterior dilated lateral margins, castaneous; remaining area reticulated with castaneous, its anterior margin defined by a transverse linear series of punctate spots; scutellum with the basal callosity less reticulated than remaining surface and with a short transverse levigate spot on each side. Body beneath black, the sternum opaque; head beneath, lateral margins of sternum and abdomen, legs, rostrum, antennæ, and two rather long ray-like spots at apices of each abdominal segment, ochraceous.

Length $4\frac{1}{4}$; max. breadth $4\frac{1}{4}$ millim.

Hab. Tenasserim; Myitta (*Doherty*).

b. *Abdomen with short marginal spots.*

40. **Coptosoma pardalinum,** *Stål, En. Hem.* v, p. 13 (1876); *Atk. J. A. S. B.* vol. lvi, p. 32 (1887).

Ochraceous, somewhat thickly covered with subreticulate black markings; head, with the margins of the central lobe widening into spots at the ocelli, black; anterior area of the pronotum impunctate, containing two transverse angulate black striæ centrally connected with the head and transverse impression, a sublateral series of brown punctures in each anterior dilated margin, posterior area of pronotum and scutellum with subreticulate black markings, the basal callosity to scutellum with its lateral apices and a central spot ochraceous, levigate; sternum piceous, opaque; abdomen black, shining. Head beneath, rostrum, legs, antennæ, lateral margins of abdomen, and a double series of spots at apex of each abdominal segment, ochraceous.

Length $4\frac{1}{2}$; max. breadth $4\frac{1}{2}$ millim.

Hab. Tenasserim (*Montand. Coll., Brit. Mus.*).

41. **Coptosoma limbatum,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 115 (1896).

Ochraceous, thickly punctured with brown; head, anterior area and lateral margins of pronotum, basal callosity, with a small transverse spot a little above its apices, and lateral and apical margins of scutellum, ochraceous, levigate; central lobe and base of head, transverse angulated striæ, and a central line to anterior area of pronotum, a sublateral series of punctures in each anterior pronotal dilatation, and the margins of basal callosity to scutellum dark castaneous; sternum piceous, opaque; abdomen shining black: head beneath, antennæ, rostrum, legs, lateral margins

sternum and abdomen, and a double row of spots on each segmental apex, ochraceous.

Length $3\frac{1}{4}$ to $3\frac{1}{3}$; max. breadth $3\frac{1}{4}$ to $3\frac{1}{3}$ millim.

Hab. Tenasserim; Myitta (*Doherty*).

42. **Coptosoma abbreviatum,** *Montand. Ann. Soc. Ent. Belg.* xxxviii, p. 265 (1894).

Pale yellow, irregularly punctured with piceous; anterior disk of pronotum marked much as in *C. cribrarium* (Fabr.); punctures a little thicker and darker than in that species, being especially larger and darker on the lateral areas of the scutellum, which also possesses a distinct central levigate line extending about halfway from base. Abdomen with a series of short spots at apices of abdominal segments.

Length $2\frac{2}{3}$; max. breadth $2\frac{1}{2}$ millim.

Hab. Central India; Barwai (*Montand. Coll., Brit. Mus.*).

c. *Abdomen with a transverse linear series of marginal spots.*

43. **Coptosoma signaticolle,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 112 (1896).

Very closely allied to *C. limbatum*, Montand., but smaller, more elongate, the transverse dark striæ on anterior area of pronotum connected, not centrally divided; beneath, the spots at the abdominal segmental apices are linear, transverse, one in each segment.

Length $2\frac{2}{3}$; max. breadth $2\frac{1}{2}$ millim.

Hab. Trichinopoly (*Montand. Coll., Brit. Mus.*).

III. Head dissimilar in the two sexes; in males the lateral lobes somewhat foliaceous, their margin reflexed, their apices meeting in front of the central lobe.

44. **Coptosoma amyoti,** *Montand. Ann. Soc. Ent. Fr.* 1896, p. 448.

Ochraceous, punctured with piceous; head with the whole basal area piceous; pronotum with two large transverse piceous fasciæ on anterior disk, connected centrally where there is a short longitudinal prolongation on each side, sublateral linear series of black punctures in each anterior lateral dilatation; scutellum with a somewhat large piceous central basal spot. Body beneath piceous; legs, antennæ, and rostrum reddish-ochraceous; lateral margins of abdomen and a transverse series of linear spots covering apices of each abdominal segment, ochraceous.

Length ♂ 4; max. breadth 4 millim.

Hab. Pondicherry (*Montand. Coll., Brit. Mus.*).

IV. Head with the central lobe free, about as long as lateral lobes or nearly as long.

A. *Head entirely black.*

45. **Coptosoma libidinosum,** *Montand. Ann. Soc. Ent. Belg.* xxxviii, p. 277 (1894).

Black, shining; lateral margins of pronotum and anterior lateral margins with an inner oblique fascia, two rounded spots at base of scutellum—one near each end of basal callosity—and the extreme lateral and apical margins of scutellum, ochraceous. Body beneath black; antennæ and legs ochraceous; lateral margins of abdomen and a posteriorly angulated spot at base of each abdominal segment ochraceous.

Length 3 to $3\frac{1}{4}$; max. breadth $2\frac{4}{5}$ to 3 millim.

Hab. Central India; Barwai (*Montand. Coll., Brit. Mus.*).

B. *Head with a small reddish spot in front of eyes.*

46. **Coptosoma sphærula,** *Germ.* (Thyreocoris) *Zeitschr.* i, p. 25. 2 (1839).

Var. illuminatum, *Montand. Ann. Soc. Ent. Belg.* xl, p. 450 (1896).

Black, shining; a very small castaneous spot in front of eyes, which are almost the same colour; two small spots on pronotum behind eyes, the pronotal lateral margins and an inner oblique line, and lateral and apical margins of scutellum ochraceous. Body beneath black; antennæ, rostrum, and legs brownish-ochraceous; lateral margins of sternum and abdomen, and a double row of longitudinal linear spots at apices of abdominal segments ochraceous.

Length 3; max. breadth 3 millim.

Hab. Central India; Barwai (*Montand. Coll., Brit. Mus.*).—A common Javan insect.

47. **Coptosoma parvulum,** *Dall. List Hem.* i, p. 65 (1851).

Black, shining, very thickly and finely punctured; head with a small reddish spot on each side before the eyes; eyes reddish-brown; pronotum with a faint transverse furrow across the centre, the anterior lateral dilated margins ochraceous; scutellum with a distinct basal callosity; lateral basal margin of corium ochraceous. Body beneath black; abdomen with the lateral margin and a submarginal spot on sides of each segment ochraceous; legs and antennæ brownish-ochraceous, bases of the femora brownish.

Length $2\frac{1}{4}$ to $2\frac{1}{2}$; max. breadth $2\frac{1}{4}$ to $2\frac{1}{2}$ millim.

Hab. "East Indies"—(*Wooley's Coll., Brit. Mus.*).

C. Head with lateral lobes in front of eyes ochraceous.

A. Apical half of scutellum more or less ochraceous.

48. **Coptosoma assamense,** *Atk. Proc. A. S. B.* 1886, p. 174: *J. A. S. B.* lvi, p. 35, n. 25 (1887).

Body above black; head with the lateral lobes from about in front of eyes ochraceous, with their extreme margins black; anterior dilated margin of pronotum—intersected by a narrow black line—two small spots on anterior margin, two large transverse linear spots on anterior disk and a small spot near each lateral angle, a large transverse spot at each end of the basal callosity of the scutellum, followed by a very small basal spot on each side, the lateral margins and nearly posterior half of disk, ochraceous; the posterior ochraceous area is thickly and darkly punctate except on margins and contains a large rounded marginal black spot on each side. Body beneath black; legs, rostrum, antennæ, lateral margins of sternum and abdomen, and a series of somewhat linear spots, one on the apex of each abdominal segment, ochraceous.

Length $2\frac{1}{2}$ to 3; max. breadth $2\frac{1}{2}$ to 3 millim.

Hab. Assam.

49. **Coptosoma biosculatum,** *Montand. Ann. Soc. Ent. Belg.* xxxviii, p. 271 (1894).

Black, about apical two-thirds of the scutellum ochraceous, thickly punctate, and with a large rounded black spot near apex of each lateral margin; lateral lobes of head in front of eyes, lateral margins of pronotum (divided by a black line of punctures), lateral angles, and two linear curved fasciæ on disk of pronotum, ochraceous; a large transverse luteous spot near each apex of the basal callosity to scutellum. Body beneath black, the sternum opaque; antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a spot at the apex of each abdominal segment, ochraceous.

Length $3\frac{1}{4}$; max. breadth $3\frac{1}{4}$ millim.

Hab. Central India; Barwai (*Montand. Coll., Brit. Mus.*). Burma; Ruby Mines (*Doherty*).—Also received from Tonkin.

50. **Coptosoma caudatum,** *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 129 (1894).

Black, shining, about posterior half of scutellum ochraceous, thickly and brownly punctate, with a small black spot near apex of each lateral margin; lateral lobes of head in front of eyes, lateral margins of pronotum—toothed internally, and intersected with an oblique line of dark punctures,—anterior margin, widely separated at centre, two curved transverse spots on anterior disk, and the lateral angles, a large transverse spot at each apex of basal

callosity of scutellum, followed by a small transverse spot near each basal angle, and the lateral and apical margins, ochraceous. Body beneath black, the sternum opaque; head beneath, antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a spot at the apex of each abdominal segment, ochraceous.

Length 3 to $3\frac{1}{2}$; max. breadth 3 to $3\frac{1}{2}$ millim.

Hab. Burma; Karennee (*Fea*), Momeit (*Doherty*).

51. **Coptosoma pulchellum,** *Montand. Ann. Mus. Genov.* xxxiv, p. 136 (1894).

Var. discinctum, *var.* omnimundum, & *var.* impeditum, *Montand. Ann. Soc. Ent. Belg.* xl, pp. 118–9 (1896).

Head ochraceous, the base and central lobe black; pronotum black mottled with ochraceous or wholly black, anterior margin, broken at centre, lateral margins, an oblique sublateral fascia to anterior dilatations, and two transverse fasciæ (sometimes very indistinct) on anterior disk, ochraceous; scutellum with a large black basal spot crossing basal callosity, where it is sometimes margined on each side with a bright ochraceous levigate spot, also a black spot on each lateral margin beyond middle. Body beneath black; head beneath, lateral margins of sternum, antennæ, rostrum, legs, lateral margins of abdomen, and a notched transverse spot at the apex of each abdominal segment, ochraceous.

Length 3 to $3\frac{1}{2}$; max. breadth 3 millim.

Hab. Pondicherry (*Montand. Coll., Brit. Mus.*). Burma; Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Also recorded from Java and China.

B. Scutellum with the apex broadly and angularly ochraceous.

52. **Coptosoma W,** *Montand. Rev. Ent. Franç.* xii, p. 237 (1893).

Above black; lateral lobes of the head from about in front of eyes ochraceous, their margins narrowly black; the margins of the

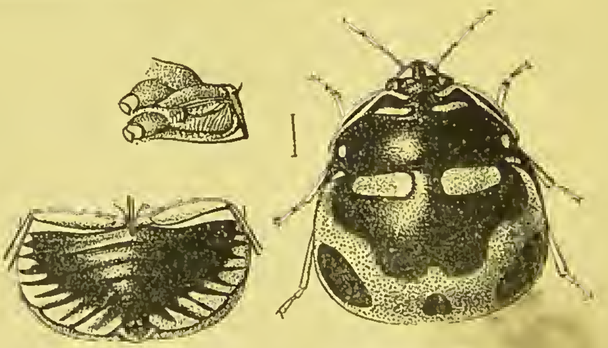

Fig. 12.—*Coptosoma W.*

anterior lateral dilatations of pronotum, an inner oblique line

connected with the anterior margin, much broken in centre, two transverse linear spots on anterior disk and a small spot near each lateral angle, also a large transverse spot on each side of the basal callosity of scutellum, each followed by a very small basal spot, the lateral margins, and a large W-shaped spot on apical area connected with the lateral margins, ochraceous. Body beneath black; head beneath, rostrum, legs, lateral margins of sternum, and a marginal series of large bifid ray-like spots to abdomen, ochraceous.

Var. *a*. W-shaped spot to scutellum not reaching lateral margins.

Var. *b*. W-shaped spot to scutellum practically absent.

Length 4; max. breadth $3\frac{1}{2}$ millim.

Hab. Central India; Barwai (*Montand. Coll.*, *Brit. Mus.*). Burma; Bhamo (*Fea*).

53. **Coptosoma margheritæ,** *Dist. A. M. N. H.* (7) viii, p. 238 (1901).
Coptosoma W?, *Dist. A. M. N. H.* (7) iv, p. 216 (1899).

Black, shining; lateral lobes of head in front of eyes (excluding their extreme outer margins), lateral margins of pronotum divided by a central black line, and two small spots behind head ochraceous; scutellum with two large central basal spots, and two large apical subquadrate spots united on apical margin and connected with the narrow lateral margins, reddish-ochraceous. Body beneath black; head beneath, lateral margins of sternum, rostrum, legs, and a marginal series of large bifid ray-like spots to abdomen, ochraceous.

Length 4; max. breadth 4 millim.

Hab. Assam; Margherita (*Atkinson Coll.*, *Brit. Mus.*).

C. Scutellum black, the apical half concolorous.

a. *Pronotum with a broken pale anterior margin.*

a′. *Scutellum with spots on basal callosity.*

54. **Coptosoma cardoni,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 448 (1896).

Black, shining, punctate, the punctures particularly close, coarse and prominent on the lateral margins of the pronotum and on each lateral area of the scutellum; lateral lobes of head in front of eyes, anterior dilated lateral margins of pronotum (intersected by a black line of punctures), the anterior margin, broadly broken at centre, a small spot near each end of the basal callosity and the margins of scutellum, ochraceous. Body beneath black; antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a linear spot crossing apex of each abdominal segment, ochraceous.

Length 3; max. breadth 3 millim.

Hab. Central India; Barwai (*Montand. Coll.*, *Brit. Mus.*).

55. **Coptosoma erosum**, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 131 (1894).

Body above black; head with the lateral lobes from about in front of eyes ochraceous, their extreme margin black; pronotum with the anterior lateral dilatations intersected by a black line, anterior margin widely broken at centre, two transverse linear slightly curved spots on anterior disk, and a spot at each lateral angle, ochraceous; scutellum with a large transverse spot on each side of the basal callosity, followed on each side by a small basal spot, and the margins, ochraceous; scutellum also with a patch near each basal angle, and a larger one on apical area brownish-ochraceous and coarsely and darkly punctate. Body beneath black; head beneath, antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a linear spot crossing apex of each abdominal segment, ochraceous.

Length $2\frac{1}{2}$ to 3; max. breadth $2\frac{1}{2}$ to 3 millim.

Hab. Burma; Karennee (*Fea*).

56. **Coptosoma nepalense**, *Westw. in Hope Cat.* i, p. 17 (1837).
Coptosoma circumscriptum, *Dall.* (*nec Germ.*) *List Hem.* i, p. 63. 3 (1851).
Coptosoma cinctum, *Vollenh. Faun. Ind. Néerl.* i, p. 46 (1863).
Coptosoma obrosum, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 138 (1894).

Above shining black; head with the lateral lobes in front of eyes ochraceous, their margins narrowly black; pronotum with the lateral margins, intersected by an oblique black line at anterior dilatation, and anterior margin broadly broken at centre, ochraceous; scutellum with a small spot at each end of basal callosity, a small transverse spot near basal angle, and the lateral and posterior margins, ochraceous. Body beneath black, the sternum opaque; antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a linear spot—interiorly toothed—at end of each abdominal segment, ochraceous; coxæ and bases of femora piceous.

Length 3; max. breadth 3 millim.

Hab. Sikhim; Mungphu (*Coll. Dist.*). Burma; Shwegu (*Fea*).—Apparently also found generally throughout the Malay Archipelago.

57. **Coptosoma siamicum**, *Walk. Cat. Het.* i, p. 89. 39 (1867): *Dist. A. M. N. H.* (7) viii, p. 240 (1901).
Coptosoma concinnula, bellula, & inclusa, *Walk. loc. cit.* pp. 94, 95.
Coptosoma saundersii, *Leth. & Sev. Cat. Gén. Hém.* t. i, p. 9 (1893).
Coptosoma sphærula (part.), *Leth. & Sev. loc. cit.* p. 9: *Dist. A. M. N. H.* (7) iv, p. 215 (1899).
Coptosoma minima, *Atk. J. A. S. B.* lvii, p. 342 (1889); *Kulg. Arch. f. Naturg.* 1901, p. 224.
Coptosoma pygmæum, *Montand. Ann. Soc. Ent. Belg.* xl, p. 120 (1896); *Kulg. Arch. f. Naturg.* 1901, p. 221.

Var. orbicula, *Walk.*
Coptosoma orbicula & blandula, *Walk. Cat. Het.* i, pp. 91, 96, nn. 47, 61 (1867).
Coptosoma pygmæum, *var.* accensitum, *Montand. Ann. Soc. Ent. Belg.* xl, p. 447 (1896).

Black, shining; lateral lobes of the head from front of eyes ochraceous, their extreme margins black; pronotum with the anterior margin only indicated by two small spots, or else widely broken, the lateral margins, intersected by a black line on anterior dilatations, and a spot at lateral angles variable in size, ochraceous; scutellum with a spot at apices of basal callosity—sometimes small and rounded or transverse and elongate,—a smaller spot near basal angles variable in size, and the margins, ochraceous. Body beneath black, sternum opaque; head beneath, rostrum, antennæ, and legs reddish-ochraceous; lateral margins of sternum and abdomen and a spot at apex of each abdominal segment pale ochraceous.

Var. Pronotum with two discal transverse spots on anterior area.

Length $2\frac{1}{4}$ to $2\frac{1}{2}$; max. breadth $2\frac{1}{4}$ to $2\frac{1}{2}$ millim.

Hab. Calcutta. Central India; Barwai. Ceylon. Burma; Karennee, Mergui.—Also received from Siam, Tonkin, the Malayan Archipelago, and N. Australia.

58. **Coptosoma brunneum,** *Atk. J. A. S. B.* lvii, p. 342 (1889).

Blackish or very dark castaneous; central lobes of head in front of eyes, a spot at base of central lobe, and the ocelli ochraceous; pronotum with the anterior lateral dilated margins, intersected by an oblique black line, anterior margin widely broken at centre, and two transverse lines on anterior disk, ochraceous; lateral angles pale castaneous; scutellum with a small reddish spot at each end of basal callosity and the lateral and apical margins ochraceous. Body beneath black; head beneath, rostrum, antennæ, legs, lateral margins of the sternum and abdomen, and a linear spot at apex of each abdominal segment, ochraceous.

Length 3; max. breadth $2\frac{3}{4}$ millim.

Hab. Ceylon; Pundulоya (*Atkinson Coll., Brit. Mus.*).

b′. *Scutellum with spots on basal callosities inconstant.*

59. **Coptosoma noualhieri,** *Montand. Ann. Soc. Ent. Belg.* xl, p. 439 (1896).
Var. obscuratum, *Montand. ibid.* p. 441.

Above black, shining; head with the lateral lobes ochraceous, their margins narrowly black; pronotum with the lateral margins ochraceous, inwardly edged with an oblique series of black punctures; scutellum with the lateral and apical margins very narrowly ochraceous. (Basal callosity of the scutellum sometimes containing a very minute ochraceous spot a little before its apices, and with some tessellate ochraceous markings a little beneath its

apices.) Body beneath black, the sternum opaque; head beneath, antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a linear spot at the apex of each abdominal segment, ochraceous.

Length 3 to 3½; max. breadth 3 to 3½ millim.

Hab. Central India; Barwai. Palni Hills (*Montand. Coll.*, *Brit. Mus.*).

c'. *Scutellum with basal callosity ochraceous, or ochraceous and darkly punctate.*

60. **Coptosoma breve**, *Walk. Cat. Het.* i, p. 89 (1867).

Black, shining; lateral lobes in front of eyes ochraceous, their extreme margins black; pronotum with the lateral margins, intersected with a line of dark punctures at the anterior dilatations, anterior margin and a subanterior fascia, both finely broken centrally, and the lateral angles, ochraceous; scutellum with the whole of the basal callosity, a transverse spot at basal angles, and the lateral and apical margins ochraceous. Body beneath black, the sternum opaque; head beneath, antennæ, rostrum, legs, lateral margins of sternum and abdomen, and an irregularly shaped spot at apex of each abdominal segment, ochraceous.

Length 3¼; max. breadth 3¼ millim.

Hab. Burma (*Brit. Mus.*).

61. **Coptosoma laticeps**, *Dall. List Hem.* i, p. 68 (1851).

Above black, shining; head with the lateral lobes in front of eyes ochraceous, their extreme margins black; pronotum with the lateral margins very broadly and the anterior margin narrowly—widely broken at centre—ochraceous, the lateral margins much punctured with brown; scutellum with a very narrow and slightly elevated basal callosity ochraceous with a few scattered punctures, the margins dull ochraceous punctured and mottled with brown. Body beneath black, the sternum opaque; head beneath, rostrum, antennæ, legs, lateral margins of sternum and abdomen, and a spot at apex of each abdominal segment, ochraceous; bases of the femora castaneous.

Length 4; max. breadth 3¾ millim.

Hab. Ceylon (*Brit. Mus.*).

b. *Pronotum with entire anterior margin pale.*

62. **Coptosoma distigmum**, *Montand. Ann. Soc. Ent. Belg.* xl, p. 441 (1896).

Above black, shining; lateral lobes of head in front of eyes ochraceous, their extreme outer margins black; pronotum with the lateral anterior dilated margins, an inner oblique line, the anterior margin, the lateral angles and some scattered markings between them ochraceous, the last distinctly coarsely punctate; scutellum with a spot at each end of the basal callosity and the

narrower lateral and apical margins ochraceous. Body beneath black, the sternum opaque; legs, rostrum, and antennæ brownish-ochraceous; lateral margins of the sternum and abdomen, and a spot, generally inwardly notched, at each apex of the abdominal segments, ochraceous.

Length 3; max. breadth 3 millim.

Hab. "India" (*Montand. Coll. Brit. Mus.*).

63. **Coptosoma integrum**, *Walk. Cat. Het.* i, p. 88 (1867).

Allied to *C. indicum*, Dist., but larger, with the anterior margin of the pronotum ochraceous, other markings similar. Pronotum broader, basal callosity to the scutellum much more clearly defined.

Length 3; max. breadth $2\frac{1}{4}$ millim.

Hab. "India" (*Brit. Mus.*).

c. *Pronotum with the anterior margin concolorous.*

64. **Coptosoma indicum**, sp. n., *Leth. in litt.*

Black, shining; lateral lobes of head from about front of eyes, lateral margins of the pronotum, basal margin of corium, lateral and apical margins of scutellum ochraceous. Body beneath black, sternum opaque; antennæ, rostrum, legs, lateral margins of sternum and abdomen, and a linear spot at end of each abdominal segment ochraceous.

Length 2; max. breadth 2 millim.

Hab. Ceylon: Point de Galle (*D'Albertis*).—Also received from Siam.

The smallest species at present known to occur in this fauna.

65. **Coptosoma naziræ**, *Atk. J. A. S. B.* lvii, p. 343 (1889).

Black, shining; lateral lobes of the head ochraceous, their margins somewhat broadly black; eyes castaneous; lateral margins of pronotum, intersected by a black line at anterior dilatations, lateral and posterior margins of scutellum, and a small transverse spot at each end of the basal callosity ochraceous. Body beneath black, the sternum opaque; antennæ, rostrum, legs, margins of the sternum and abdomen, and a spot at end of each abdominal segment ochraceous; apical joint of antennæ and bases of posterior femora infuscated.

Length $2\frac{1}{2}$ to 3; max. breadth $2\frac{1}{2}$ to 3 millim.

Hab. Assam. Sikhim: Mungphu (*Atkinson Coll.*).

d. *Pronotum with sometimes two small spots near anterior margin.*

66. **Coptosoma feanum**, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 142 (1894).

Above black, shining; lateral lobes to head in front of eyes ochraceous, or either as in the type specimen wholly, or only

partially ochraceous; lateral margins of the pronotum, intersected by a black line, and sometimes two small spots near anterior margin of pronotum, lateral and apical margins, and a large transverse spot at each end of the basal callosity to the scutellum, ochraceous. Body beneath black; legs, antennæ, rostrum, lateral margins of sternum and abdomen, and a spot at apex of each abdominal segment ochraceous.

Length 3; max. breadth 3 millim.

Hab. Sikhim: Mungphu (*Ind. Mus.*). Nága Hills (*Doherty*). Nilgiri Hills (*Hampson*). Burma: Karennee, Rangoon (*Fea*). Tenasserim, Myitta (*Doherty*).

D. *Head with whole anterior margin ochraceous.*

67. **Coptosoma fimbriatum**, *Dist. Trans. Ent. Soc.* 1887, p. 342.

Body above shining black; broad margins of head, eyes, ocelli, antennæ, lateral margins of pronotum, abdominal margin as seen at base of scutellum, head beneath, rostrum, legs, margins of sternum and abdomen, and anal segment, reddish-ochraceous; abdomen beneath shining black; sternum dull opaque black.

Length 5; max. breadth 5 millim.

Hab. Sikhim.

E. *Head more or less wholly ochraceous.*

68. **Coptosoma testaceum**, *Walk. Cat. Het.* i, p. 91 (1867).
Var. Coptosoma immaculatum, *Montand. Ann. Soc. Ent. Belg.* xxxviii, p. 265 (1894).

Body above ochraceous, coarsely punctate; head with the central lobe and base more or less castaneous; pronotum with the anterior area for about one-third from anterior margin defined by a transverse line of castaneous punctures, within these is a central longitudinal line, on each side of which is a castaneous transverse angulate fascia, an oblique row of punctures in each anterior lateral dilatation, the posterior area somewhat greenish; scutellum with a narrow basal callosity, the apices of which are pale ochraceous, levigate; the whole central basal area of scutellum more or less castaneous; sternum piceous, opaque; abdomen shining castaneous: head beneath, lateral margins of sternum, antennæ, rostrum, legs, lateral margins and elongate spots at apices of abdominal segments, ochraceous.

Length 4 to 4½; max. breadth 4 millim.

Hab. Calcutta (*Ind. Mus.*). Java (*Brit. Mus.*).

69. **Coptosoma pernobile**, *Dist. A. M. N. H.* (7) viii, p. 237 (1901).

Above pale reddish-ochraceous, somewhat thickly covered with dark brown punctures; head with the anterior margin, the central lobe, and basal fascia from inner margins of eyes black, eyes cas-

taneous; antennæ ochraceous, fourth and fifth joints infuscated; pronotum with two short curved transverse linear black fasciæ on disk; scutellum with a small macular cluster of dark punctures on each side of basal margin, and a similar spot at apex: head beneath and sternum piceous, opaque; abdomen beneath shining black; lateral margins of sternum, legs, lateral margins and two prominent ray-like fasciæ at apex of each abdominal segment, ochraceous; each of the ray-like fasciæ possesses a small black spot at base.

Length 6; max. breadth 6 millim.

Hab. Assam: Margherita (*Doherty*).

70. **Coptosoma nobile,** *Dohrn, Stett. ent. Zeit.* xxi, p. 400 (1860).

Head ochraceous, the base and central lobe castaneous; pronotum castaneous, the anterior and lateral areas ochraceous, the anterior area with a central longitudinal fascia uniting two large waved and angulated transverse fasciæ castaneous, a sublateral linear series of castaneous punctures in the anterior lateral dilatation; scutellum ochraceous, punctured and mottled with castaneous, the basal callosity pale ochraceous, with a central spot and its apices castaneous, and a few castaneous puuctures on each side of the central spot; beyond the callosity is a large patch of dark castaneous and a subapical angulated fascia of the same colour; sternum piceous, opaque, abdomen shining dark castaneous: head beneath, lateral margins of sternum, antennæ, rostrum, legs, lateral margins of abdomen, and large bifid spots at apices of abdominal segments, ochraceous.

Length 4; max. breadth $3\frac{1}{2}$ millim.

Hab. Trichinopoly (*Montand. Coll. Brit. Mus.*). Ceylon (*Brit. Mus.*).

The following species bave not been seen by the writer:—

71. **Coptosoma solitarium,** *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 126 (1894).

Stated by Montandon to be somewhat allied to *C. atomarium*, Germ., having the head straightened, very prominent and attenuated in front, with the lateral lobes separated, not meeting in front of the central lobe. The general colour is luteous punctured with black.

Length 3; max. breadth $2\frac{4}{5}$ millim.

Hab. Burma: Shwegu (*Fea*).

Described from a single female example in the Genoa Museum.

72. **Coptosoma tenasserimense,** *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 127 (1894).

Described as having the appearance of a pale variety of *C. pul-*

chellum, Montand., in which the ochraceous coloration predominates; it also differs by "la ponctuation aciculée de l'abdomen."

Length 3; max. breadth $2\frac{4}{5}$ millim.

Hab. Tenasserim: Aswon west of Moulmein (*Fea*).

Described from a single female example in the Genoa Museum.

73. **Coptosoma ophthalmicum**, *Montand. Ann. Mus. Civ. Gen.* xxxiv, p. 140 (1894).

This species is described as being easily recognized by the form and dimensions of the eyes, which are "globuleux, très saillants, espace interoculaire moins de deux fois le diamètre de l'œil."

It is also described as being subpentagonal, as long as wide posteriorly, black, shining, very finely punctate, yellow on the lateral margins of the pronotum and the exterior margins of the scutellum; two dull yellow spots in front of the pronotum level with the ocelli, and two similar spots at the apices of the basal callosity to the scutellum.

Length $2\frac{1}{2}$ to 3; max. breadth $2\frac{1}{2}$ to 3 millim.

Hab. Burma: Karennee (*Fea*).

Male and female specimens in the Genoa Museum.

Genus **TROPIDOTYLUS**.

Tropidotylus, *Stål, En. Hem.* v, p. 4 (1876).

Type, *T. fasciolatus*, Stål.

Distribution. Ceylon.

Head with eyes much narrower than pronotum, the central lobe distinctly elevated and carinate, a little longer than the lateral lobes, which have their apices broadly convex; ocelli much farther from each other than from eyes; pronotum with the anterior lateral angles flattened, dilated and rounded, lateral margins nearly straight or obtusely sinuate, anterior margins sinuate near eyes; scutellum near base transversely impressed.

74. **Tropidotylus fasciolatus**, *Stål, En. Hem.* v, p. 15 (1876).

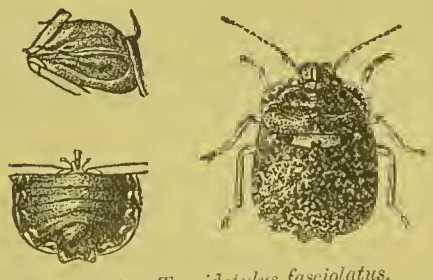

Fig. 13.—*Tropidotylus fasciolatus.*

Shining piceous, much irrorated with ochraceous, especially on head, anterior and lateral areas of pronotum, and basal angles of scutellum; scutellum with a central basal ochraceous fascia containing two small central and two larger subterminal black spots: body beneath piceous; base of head, antennæ, rostrum, legs, and a double series of small marginal spots to abdomen ochraceous. Pronotum with a transverse

impression on anterior area, before which the surface is very slightly gibbous.

Length 6; max. breadth 4 millim.

Hab. Ceylon.

Genus BOZIUS.

Bozius, *Dist. A. M. N. H.* (7) viii. p. 238 (1901).

Type, *B. exsiccus*, Dist.

Distribution. Nilgiri Hills.

Body moderately concave above, subovate; head deflected, convexly rounded in front, the central lobe as long as the lateral lobes but not elevated, a distinct transverse impression in front of eyes; antennæ moderately robust, second joint minute. Pronotum long, anterior margin concave, anterior lateral margins moderately laminately dilated, a distinct transverse impression about one-third from apex; scutellum very strongly transversely impressed near base, the impression not extending to the basal angles, and with a deep foveate impression on each side of its termination. Rostrum just passing the anterior coxæ; femora and tibiæ, especially the intermediate and posterior, somewhat longly hirsute. Odoriferous apertures linear, ascending. Abdomen beneath pilose.

Allied to *Tropidotylus*, but differing by the non-elevated central lobe to the head, the foveately depressed scutellum, different position of the odoriferous apertures, &c.

75. **Bozius exsiccus**, *Dist. A. M. N. H.* (7) viii, p. 239 (1901).

Dull ochraceous, somewhat coarsely and darkly punctate fourth and fifth joints of antennæ, and some irregular markings

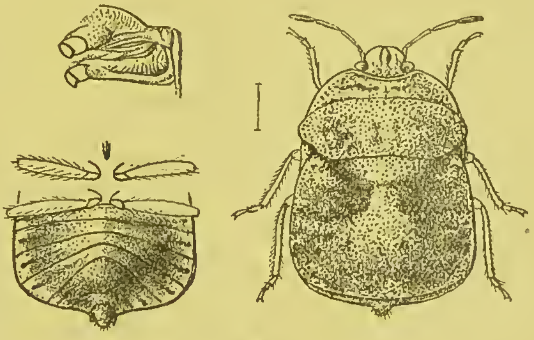

Fig. 14.—*Bozius exsiccus.*

on the scutellum, of which the most prominent are at the foveate impressions, two on anterior disk, three or four transverse spots on central lateral area, and some obscure apical spots piceous: sternum dull greyish opaque; abdomen piceous: head beneath,

lateral margins of sternum, legs, rostrum, and obscure marginal abdominal spots dull ochraceous. Central impression and foveæ to scutellum profound; third, fourth, and fifth joints of antennæ subequal in length, or third slightly longest.

Length 5; max. breadth 4 millim.

Hab. Nilgiri Hills (*Hampson*).

76. **Bozius respersus**, *Dist. A. M. N. H.* (7) viii, p. 239 (1901).

Above ochraceous, punctured and mottled with piceous; head with the anterior margins, base and margins of central lobe, and basal area piceous; pronotum with two piceous transverse subfoveate spots, each containing posteriorly a small ochraceous spot, immediately in front of the transverse impression, disk considerably mottled with piceous, anterior and anterior lateral margins ochraceous, levigate; scutellum with the basal impressed space with a black central fascia and black at the foveate extremities, on the basal half the punctures form somewhat oblique longitudinal fasciæ, on the apical third there are some transverse series of irregularly shaped black spots. Body beneath piceous, the sternum opaque, the abdomen shining; head beneath, rostrum, lateral margins of sternum, legs, antennæ, lateral margins and an inner row of linear marginal spots to abdomen ochraceous; fourth and fifth joints of antennæ piceous.

Length 6; max. breadth 5 millim.

Hab. Nilgiri Hills (*Hampson*); Ootacamund (*Atk. Coll. Brit. Mus.*).

Subfamily II. SCUTELLERINÆ.

Scutellerida, *Stål, Hem. Afr.* i, p. 33 (1864).
Scutellerinæ, *Dist. Biol. Centr.-Am., Rhynch.* vol. i, p. 12. 1 (1880).

The Scutellerinæ as thus understood include the Scutellerides, Pachycorides, Tetyrides, and Eurygastrides (pt.) of Amyot and Serville; the Pachycoridæ and Eurygastridæ of Dallas. We recognize the group as thus diagnosed by Stål:—

Primary and subtended veins of wings remote, including a broad central area; hamus present; scutellum very large, without frena.

The Scutellerinæ are distributed throughout all the zoo-geographical regions; in beauty, size, and number they reach their highest development in the Oriental and Ethiopian Regions. The subfamily may be considered as focussed in the Malayan area, and is very strongly represented in the Indian fauna.

As insect-pests the Scutellerinæ probably play no inconsiderable rôle, but at present we only possess a scanty record. *Pœcilocoris hardwickii* is said to be a pest to the tea-shrubs in Bhutan, while from Cape Town I have received a report that *Cryptacrus pinguis* has been found in banana bundles from Natal. *Eurygaster maurus*,

a Palæarctic species also found in North-west India, has been stated in France to pierce and suck ears of wheat while in the green condition.

Division *ELVISURARIA*.

Elvisuraria, *Stål, En. Hem.* iii, p. 3 (1873).

Meso- and metasterna with a central broad canal-like process, its margins very prominently raised; pronotum and scutellum at base moderately convex; pronotum at base posteriorly produced between the basal angles of the scutellum. Rostrum with the second joint much shorter than the two apical joints together and a little longer than the apical joint. Abdomen beneath with a broad central sulcation, and with the incisures gradually curved on the disk.

This division includes four genera containing a few species somewhat widely distributed; two occur in this fauna.

Body elongate; pronotum with the posterior margin convexly rounded	OXYPRYMNA, p. 39.
Body obovate; pronotum with the posterior margin truncate	SOLENOSTETHIUM, [p. 40.

Genus **OXYPRYMNA**.

Oxyprymna, *Stål, En. Hem.* iii, p. 5 (1873).
Elvisura, *Stål, Hem. Afr.* i, p. 35 (1864).

Type, *O. spinolæ*, Sign.

Distribution. The genus is at present known by one species from an indefinite Indian locality.

Body elongate, gradually narrowing to apex of scutellum, which is produced in a small spine; pronotum with the posterior margin convex; scutellum with a central longitudinal ridge; meso- and metasterna and abdomen beneath with a broad central furrow.

77. **Oxyprymna spinolæ**, *Sign.* (Elvisura) *Ann. Soc. Ent. Fr.* (4) i, p. 55, pl. ii, f. 2 (1861); *Stål, En. Hem.* iii, p. 5 (1873).

Fig. 15.—*Oxyprymna spinolæ.*

I have not seen this species, but reproduce Signoret's figure and the salient points of his description.

Brilliant black, the head, pronotum, scutellum, and especially the abdomen covered with a grey powdery pubescence; pronotum and scutellum with small, round, yellow spots, the last at about one-third from its apex with a punctate yellow fascia.

Length 16; breadth 9 millim.

Hab. "India" (*Coll. Sign.*).

Genus SOLENOSTETHIUM.

Solenosthedium, *Spin. Ess.* p. 360 (1837).
Cœloglossa, *Germ. Zeitschr.* i, p. 130 (1839).
Solenostethium, *Amy. & Serv. Hém.* p. 26 (1843).

Type, *S. liligerum*, Thunb. An African species.
Distribution. Throughout Africa; India; Annam; China.

Body obovate, convex; antennæ five-jointed, third joint about twice as long as the second; pronotum sexangular, the posterior and lateral angles rounded; scutellum almost entirely covering the abdomen; sternum and abdomen centrally sulcated, the sternal sulcation with its margins strongly carinate.

78. **Solenostethium rubropunctatum**, *Guér.* (Scutellera) *Voy. Coq., Zool.* ii, 2, p. 157 (1830); *Dall. List Hem.* i, p. 7. 4 (1851); *Dist. A. M. N. H.* (5) iii, p. 44 (1879); *Atk. J. A. S. B.* lvi, p. 147 (1887).

Body above purplish brown or dark castaneous; pronotum with seven reddish-ochraceous spots, three near each lateral margin and one on anterior disk; scutellum with ten reddish-ochraceous spots, six on basal margin and four a little before centre; antennæ black, with the first (or sometimes the first and second joint) reddish-ochraceous: body beneath and legs ochraceous: tibiæ and tarsi sometimes black; abdomen with the stigmatal spots, and sometimes a series of spots on the margins of the abdominal sulcation, black.

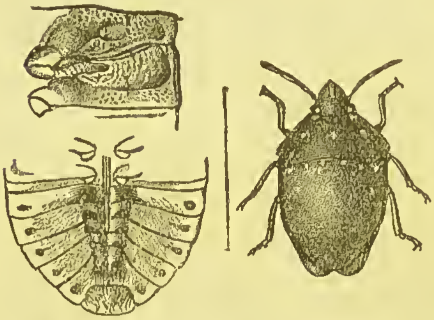

Fig. 16.—*Solenostethium rubropunctatum.*

According to Atkinson the ♂ has 10, the ♀ 8 spots on the scutellum.

Length 14 to 18 millim.

Hab. Eastern Gáro Hills (*Chennell*). Tenasserim: Meetan (*Fea*).—Also found in the Malay Peninsula, Siam, and Cambodia.

Division *SPHÆROCORARIA.*

Sphærocoraria, *Stål, En. Hem.* iii, p. 3 (1873).

Meso- and metasterna sometimes furrowed. Body above very convex; head very much depressed, almost perpendicular; basal margin of pronotum obtusely rounded towards the basal angles of the scutellum; rostrum with the second joint much shorter than the two apical joints together.

This is a small division, principally represented in the Ethiopian Region. One genus is eastern in its distribution.

Genus HYPERONCUS.

Hyperoncus, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 615; *En. Hem.* iii, p. 6 (1873).

Type, *H. punctellus*, Stål. A species from the Philippines.

Distribution. India, China, and probably throughout the Malay Archipelago.

Body obovate, above very convex; head strongly deflected, triangular; rostrum reaching the apex of the third abdominal segment; antennæ five-jointed, first joint not reaching the apex of the head; pronotum sexangular; mesosternum slightly sulcated; anterior margin of prosternum obtusely roundly dilated towards the coxæ; odoriferous apertures extending outward in a long furrow; scutellum about as broad as the abdomen; abdomen beneath with a moderate central sulcation.

79. **Hyperoncus lateritius**, *Westw.* (Sphærocoris) *in Hope, Cat. Hem.* i, p. 13 (1837); *Germ.* (Sphærocoris) *Zeitschr.* i, p. 79 (1839); *Dall.* (Sphærocoris) *List Hem.* i, p. 10. 8 (1851); *Stål, En. Hem.* iii, p. 7 (1873); *Atk. J. A. S. B.* lvi, p. 148 (1887).

Castaneous; a spot at base of head, four spots in transverse series across pronotum, usually twelve spots to scutellum, six at

Fig. 17.—*Hyperoncus lateritius.*

base, four across centre, and two near apex, area of the odoriferous apertures, and a large central spot to abdomen, black. Thickly punctate, sternum more coarsely punctate.

Length 11 to 14 millim.

Hab. Assam (*Brit. Mus.*). China: Hong Kong.

80. **Hyperoncus uniformis**, *Dist. A. M. N. H.* (7) viii, p. 60 (1901).

Above ochraceous; thickly, finely, and darkly punctate, sparingly covered with very minute black spots; sternum and legs ochraceous, coarsely and darkly punctate; abdomen brownish ochraceous, with a broad, central, ill-defined fascia, the stigmatal spots and linear macular lateral margins ochraceous; the abdomen is also coarsely punctate, much less so on central area; rostrum ochraceous, its apical joint brownish; antennæ with the first and second joints ochraceous, their apices brownish, third and fourth joints brownish, their bases ochraceous.

Length 11; width between pronotal angles 9 millim.

Hab. Ceylon (*Green*).

Division *SCUTELLERARIA.*

Scutelleraria, *Stål, En. Hem.* iii, p. 3 (1873).

Body beneath distinctly convex. Meso- and metasterna without wrinkles or ridges, sometimes furrowed. Thorax and scutellum with their bases more or less convexly inclined, the first hindwardly, the second forwardly, the convexity principally visible from the side; pronotum distinctly truncated posteriorly before the base of the scutellum, basal angles generally very distinct. Second joint of rostrum generally shorter, and often much shorter, than the two apical joints taken together.

This division of the Scutellerinæ is distributed throughout all the warmer regions of the earth and is largely represented in this fauna.

Synopsis of Genera.

I. Head elongate, gradually narrowed to apex, its lateral margins scarcely sinuate ...... CANTAO, p. 42.
II. Head shorter and broader, the lateral margins distinctly sinuate.
  A. Antennæ of four joints.
    a. Abdomen furrowed longitudinally .... TETRARTHRIA, p. 49.
    b. Abdomen not furrowed.............. FITHA, p. 64.
  B. Antennæ of five joints.
    a. Abdomen distinctly furrowed longitudinally beyond middle.
      a. Body broad, ovate .... PŒCILOCORIS, p. 44.
      b. Body elongate.................... SCUTELLERA, p. 50.
    b. Abdomen only furrowed near base .... BRACHYAULAX, p. 52.
    c. Abdomen not longitudinally furrowed.
      a. Third joint of antennæ twice or more than twice the length of second joint.
        a'. Scutellum not quite covering abdomen, connexivum exposed .. CALLIPHARA, p. 53.
        b'. Scutellum completely covering abdomen, except at base........ CHRYSOCORIS, p. 54.
      b. Third joint of antennæ longer than second, but not twice as long .... LAMPROCORIS, p. 62.

Genus **CANTAO.**

Cantao, *Amy. et Serv. Hém.* p. 29 (1843); *Dall. List Hem.* i, p. 3 (1851); *Stål, Hem. Afr.* i, p. 33 (1864); *Mayr, Reise Nov., Hem.* p. 14 (1866).

Type, *C. ocellatus*, Thunb.

Distribution. India, China, Malay Archipelago, North Australia. A species found in the Congo region of Africa has also recently been described and placed in this genus.

Body elongate, obovate. Head elongate, its lateral margins very slightly sinuate; rostrum scarcely extending beyond the base of the abdomen; pronotum broader than long, its lateral angles prominent or spined; scutellum longer than the abdomen, its apex

more or less truncate. Abdomen with a central basal sulcation; the exterior apical angles of the corium are elongately and acutely produced.

81. **Cantao ocellatus**, *Thunb.* (Cimex) *Nov. Ins. Sp.* iii, p. 60, f. 72 (1784); *Westw.* (Callidea) *in Don. Ins. China*, p. 47, pl. 20. f. 1 (1842); *Dall. List Hem.* i, p. 17. 1 (1851).
Cimex dispar, *Fabr. Ent. Syst.* iv, p. 81. 7 (1794); *Don. Ins.* pl. 13. f. 1 (1798) *see. Dall.*; *Fabr.* (Tetyra) *Syst. Rhyng.* p. 129. 5 (1803); *Burm.* (Callidea) *Handb.* (ii) i, p. 394. 5 (1835); *Herr.-Sch.* (Callidea) *Wanz. Ins.* iii, p. 99, f. 324 (1835); *Germ.* (Calliphara) *Zeitschr.* i, p. 123. 1 (1839); *Blanch.* (Scutellera) *Hist. des Ins.* iii, p. 158. 6, *Hém.* pl. 8. f. 2 (1840); *Amy. et Serv.* (Cantao) *Hém.* p. 29. 1 (1843).
Cantao rufipes, *Dall. List Hem.* i, p. 17. 3 (1851).
Stoll, Pun. f. 260, A et B.

Ochraceous or reddish-ochraceous; base and central fascia to head and antennæ bluish-black. Pronotum with sometimes two black spots near anterior margin, sometimes containing eight spots. Scutellum usually with eight, sometimes with only six, black spots, all these spots variable in size and usually with pale ochraceous margins. Body beneath with base of head, disk of sternum, rostrum, apices of femora, tibiæ, tarsi, central and lateral spots to abdomen bluish-black. Lateral angles of pronotum usually produced in a strong curved spine; in some specimens the spines are practically obsolete.

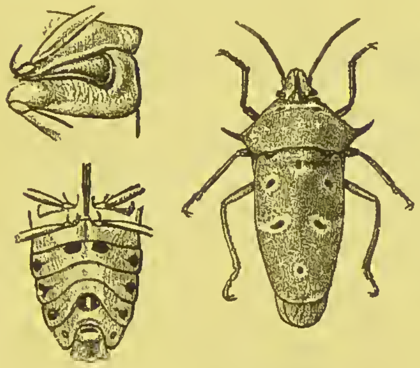

Fig. 18.—*Cantao ocellatus.*

Length 16 to 28 millim.

Hab. India, Ceylon, and Burma. Recorded from Delhi, Bombay, Malabar, Ceylon, Sikhim, Khási Hills 4500–6000 ft. (*Chennell*), Sylhet, Karennee, Tenasserim.—Also found in China, the Malay Peninsula, Java, Sumatra, and Borneo.

In Ceylon Mr. Green describes this species as "gregarious, and often found in numbers (20 or 30 together) collected on a single branch of a tree."

Mr. R. M. Dixon, of the Victoria and Albert Museum, Bombay, has forwarded me the following information relating to *C. ocellatus*:— "Occurs on the 'moon' tree (*Macaranga roxburghii*). Its habits are diurnal and very active. Pollination in the 'moon' tree seems to depend entirely upon this insect, which, by means of its feet, rostrum, and spines, conveys to the stigma the fertilizing pollen-dust, frequently from a distance of two or three miles. It is sparingly found on the Bor Ghât in April and May."

Genus PŒCILOCORIS.

Pœcilocoris, *Dall. Trans. Ent. Soc.* v, p. 100 (1848); *List Hem.* i, p. 4 (1851); *Stål, Hem. Afr.* ii, p. 33 (1864); *Mayr, Reise Nov., Hem.* p. 17 (1866).
Pœcilochroma, *White, Trans. Ent. Soc.* iii, p. 84 (1842) (nom. præocc.).

Type, *P. druræi*, Linn.
Distribution. India, China, Japan, Malay Peninsula, and Malayan Archipelago.

Body ovate, convex; head large, broad, the lateral margins sinuate. Antennæ of five joints; basal joint short, robust; second shortest and most slender; third, fourth, and fifth joints each as long as the first and second joints together or longer, they are also compressed, broad, and longitudinally sulcate. Scutellum moderately truncate at apex. Abdomen more or less distinctly sulcate beneath.

82. **Pœcilocoris latus**, *Dall. Trans. Ent. Soc.* v, p. 101. 1, pl. 13, f. 4 (1848); *Atk. J. A. S. B.* lvi, p. 152 (1887); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 12. 3 (1873).

Ochraceous, clouded with reddish-ochraceous; head, antennæ, a spot at each anterior angle of pronotum and two large spots at base of same, a transverse patch at base of scutellum, a spot at each basal angle and a transverse series of four spots beyond middle, of which the two central are largest, lateral margins of

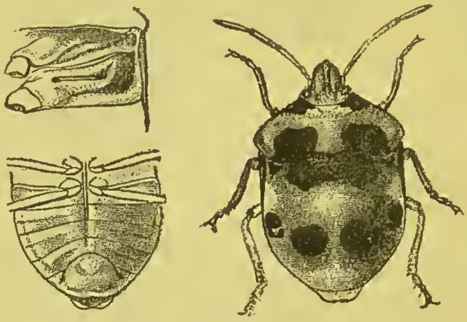

Fig. 19.—*Pœcilocoris latus.*

corium, lateral spots to sternal segments, lateral segmental spots to abdomen (sometimes absent), a spot on the last abdominal segment, rostrum, and legs, black or violaceous-black; coxæ, trochanters, bases of anterior and intermediate femora, and more than basal half of posterior femora reddish-ochraceous. The body is thickly and finely punctate, the base of the scutellum being transversely rugulose.

Length 21; width between pronotal angles 14 millim.

Hab. Assam; Sibságar. Cachar. Burma: Karennee, 900–1100 ft. (*Fea*).—Also found in China.

83. **Pœcilocoris balteatus**, *Dist.* (Pœcilochroma) *Entomologist*, xxv, *Suppl.* p. 96 (1892).

Dark purplish-black; anterior margin of pronotum (much sinuated posteriorly and containing a blackish spot at each anterior angle), a transverse much sinuated fascia to scutellum, margins and apical areas of prosternum, and a large discal spot to abdomen beneath, ochraceous or reddish-ochraceous; ventral furrow broad, extending to the base of the apical segment; rostrum reaching the third abdominal segment; body thickly, finely, and obscurely punctate.

Length 22; width between pronotal angles 14 millim.

Hab. Assam: Harmatti, base of Dafla Hills (*Atkinson*).

84. **Pœcilocoris hardwickii**, *Westw.* (Tectocoris) *in Hope Cat.* i, p. 13 (1837); *Germ.* (Scutellera) *Zeitschr.* i, p. 135. 6 (1839); *Dall. Trans. Ent. Soc.* v, p. 107. 8, pl. 13, f. 8 (1848); *Atk. J. A. S. B.* lvi, 2, p. 150 (1887).

Tectocoris affinis, *Westw. loc. cit.*

Pachycoris nepalensis, *Herr.-Sch. Wanz. Ins.* iv, p. 1, f. 339 (1839).

Pœcilocoris anisopilus, *Walk. Cat. Het.* i, p. 9. 11 (1867).

Dark reddish-ochraceous; head, anterior margin, and two large basal spots to pronotum black; eleven (usually) black spots to scutellum, situate three at base, of which the central one is longest and is closely followed by two smaller ones, four in transverse series beyond the middle, of which the two central are largest and two smaller subapical ones: body beneath (excluding lateral margins of pro- and mesosterna and the central area of abdomen), legs, rostrum, and antennæ black or violet-black.

Var. *a.* All the spots large and more or less confluent.

Var. *b.* Spots much smaller and sometimes only seven to scutellum.

The anterior and anterior lateral margins to pronotum very coarsely punctate.

Length 19 to 22; width between pronotal angles 10 to 13 millim.

Hab. Bhutan. Khási and Nága Hills (*Chennell*). Cachar. Burma: Ruby Mines (*Doherty*); Karennee (*Fea*).—Also found in West China and Hong Kong.

A species to be distinguished superficially from its nearest allies by the black anterior margin of the pronotum. A specimen originally belonging to the East India Museum, and now in the National Collection, has the following label attached:—"Tea-shrubs at Tengrac (Feb. 24, 1836); said to infect the plant, particularly near Boutan."

85. **Pœcilocoris druræi**, *Linn.* (Cimex) *Mant.* p. 534 (1771); *Dru.* (Cimex) *Ill.* i, p. 94, pl. 42, ff. 1 & 5 *a, b* (1770); *Fabr.* (Cimex) *Syst. Ent.* p. 697. 6 (1775); *Fabr.* (Tetyra) *Syst. Rhyng.* p. 132. 17 (1803); *Germ.* (Scutellera) *Zeitschr.* i, p. 135. 7 (1839); *Dall. Trans. Ent. Soc.* v, p. 103. 4, pl. 13, f. 6 (1848); *Atk. J. A. S. B.* lvi, p. 153 (1887).

Pœcilocoris obsoletus, *Dall. Trans. Ent. Soc.* v, p. 104. 5 (1848); *Atk. loc. cit.* p. 154.

Reddish-ochraceous; head, two large and irregularly shaped discal spots to pronotum, thirteen spots to scutellum (situate five at base, two central immediately behind the basal series, four in transverse series near centre, and two subapical), body beneath (excluding the lateral areas of prosternum and the central area of abdomen), legs, antennæ, and rostrum black or violaceous-black.

Var. *a.* Spots larger, and on scutellum becoming more or less confluent.

Var. *b.* Spots becoming smaller till they are practically obsolete; abdomen beneath reddish-ochraceous, with marginal and apical spots only bluish-black (*P. obsoletus*, Dall.).

In all the forms the basal margin of the corium varies from black to reddish-ochraceous, and it can always be separated from *P. hardwickii* by the absence of the black anterior margin to the pronotum.

Length 18 to 22; width between pronotal angles 12 to 13 millim.

Hab. Sikhim, Bhutan. Assam; Khási Hills; Noa-Dehing Valley (*Chennell*); Nága Hills and Margherita (*Doherty*). Burma: Kakhyeng Kauri, Karen Ashwe, and Karennee (*Fea*).—Also received from Hong Kong and Formosa.

86. **Pœcilocoris childreni**, *White* (Tectocoris), *Mag. N. H.* (2) iii, p. 542 (1839); *id.* (Pœcilochroma) *Trans. Ent. Soc.* iii, p. 84, pl. 7, f. 1 (1842); *Dall. Trans. Ent. Soc.* v, p. 106 (1848); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 13. 10 (1873); *Atk. J. A. S. B.* lvi, p. 157 (1887).

Reddish-ochraceous; head, anterior and lateral margins and four subbasal spots to pronotum, three obconical basal spots to scutellum, followed by eight other spots arranged transversely two, four, and two, legs, antennæ, and rostrum black: head beneath, sternum, central transverse segmental spots and smaller lateral segmental spots to abdomen bluish-black; femora beneath shiny greenish-black.

Length 19 to 20; width between pronotal angles 12 millim.

Hab. Bhutan (*Brit. Mus.*).

87. **Pœcilocoris crowleyi**, *Dist. A. M. N. H.* (7) viii, p. 61 (1901).

Head black, anterior lateral areas metallic-green; pronotum purplish-red, a small transverse spot near each anterior angle, a spot near each lateral angle, and two large spots at base, occupying more than half of the whole area and very narrowly divided, black; anterior margin, margins of the basal spots, and the sublateral areas metallic-green; scutellum purplish-red, with eleven black spots (three small on basal margin, two near base, two subapical, and four central which are united in pairs), basal margin, and margins of spots metallic-green; disk with a violaceous tinge.

Head beneath ochraceous, its base and two spots near apex metallic-green; outer area of prosternum purplish; posterior margins of the sternal segments ochraceous; areas of the odoriferous apertures black; abdomen beneath reddish-ochraceous, with a marginal series of wide ray-like fasciæ almost reaching centre, the greater part of the apical segment and the legs brassy-green; antennæ and rostrum black. Rostrum reaching the fifth abdominal segment.

Length 20; width between pronotal angles $11\frac{1}{2}$ millim.

Hab. Assam (*Brit. Mus.*).

A distinct species which somewhat approaches *P. childreni*, White.

88. **Pœcilocoris pulcher**, *Dall. Trans. Ent. Soc.* v, p. 105. 6, pl. 13, f. 7 (1848); *Voll. Faun. Ind. Néerl.* i, p. 5. 1, pl. i, f. 2 (1863); *Atk. J. A. S. B.* lvi, p. 156 (1887); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 13 (1873).

Deep velvety-purple; anterior and lateral margins of pronotum and a central longitudinal line (sometimes absent) ochraceous or reddish-ochraceous; scutellum with the base (irregularly) and a transverse fascia about the centre united to the base by a narrow central line shining violaceous; these violaceous markings are inconstant; sternum, legs, and rostrum dark violaceous; lateral areas of the prosternum and the abdomen beneath ochraceous; antennæ, lateral and apical spots to abdomen, black.

Length 17 to 20; width between pronotal angles 11 to 12 millim.

Hab. Malabar.—Also received from Sumatra and Borneo.

89. **Pœcilocoris obesus**, *Dall. List Hem.* i, p. 13 (1851); *Atk. J. A. S. B.* lvi, p. 158 (1887); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 13 (1873).

Above dark reddish-ochraceous; head, two transverse contiguous patches on the anterior area of pronotum, three or more distinct spots at the base of scutellum, body beneath, legs, rostrum, and antennæ brassy-green; lateral margins of the prosternum, and sometimes a discal spot to abdomen, reddish-ochraceous.

Length 15; width between pronotal angles 10 millim.

Hab. Darjeeling (*Coll. Dist.*). Assam.

90. **Pœcilocoris purpurascens**, *Westw.* (Tectocoris) *in Hope Cat.* i, p. 14 (1837); *Germ.* (Scutillera) *Zeitschr.* i, p. 135. 5 (1839); *Dall. Trans. Ent. Soc.* v, p. 103. 3, pl. 13. f. 5 (1848); *Atk. J. A. S. B.* lvi, p. 156 (1887); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 13 (1873).

Violaceous and black, in some specimens olivaceous and black, the spots (indicated by the strong violet tints on various parts of the surface) arranged similarly to those in *P. druræi*; pronotum with four small spots, one near centre of anterior and posterior margins and one on each lateral area; scutellum with five spots,

two near each lateral margin and one on disk near apex, the apical margin also sometimes bright red; body beneath shining brassy-green, the abdominal margins violaceous, with a red streak on the lateral areas of the second to fifth segments—these streaks sometimes fewer in number; legs, antennæ, and rostrum black.

Length 18 to 19; width between pronotal angles 9 to 10 millim.

Hab. Assam: Nága Hills (*Doherty*).

91. **Pœcilocoris interruptus**, *Westw.* (Tectocoris) *in Hope Cat.* i, p. 14 (1837); *Germ.* (Scutellera) *Zeitschr.* i, p. 134. 4 (1839); *Herr.-Sch.* (Scutellera) *Wanz. Ins.* i, 5, p. 73, f. 531 (1839); *Dall. Trans. Ent. Soc.* v, p. 102. 2 (1848); *Atk. J. A. S. B.* lvi, p. 155 (1887).

Dark shining olivaceous or brassy-black; ocelli, posterior margin, and a curved longitudinal line on each lateral area of pronotum, extending a little more than halfway from base, a central transverse fascia interrupted in the middle, and the apical margin of scutellum, bases of the second, third, fourth, and fifth abdominal segments, and marginal abdominal spots at the apices of the incisures, sanguineous or reddish-ochraceous.

Var. *a.* Pronotum with the posterior margin concolorous, the two curved reddish lines united in front and connected by a central line to base; the discal fascia and apical margins of scutellum united by a central line; abdomen beneath red, with large transverse spots on the lateral areas and the apical area brassy-black.

Length 14 to 17; width between pronotal angles 9 to 10½ millim.

Hab. Simla (*Coll. Dist.*). Sikhim. Nága Hills. Burma: Karennee (*Fea*); Ruby Mines (*Doherty*).

92. **Pœcilocoris ornatus**, *Dall. List Hem.* i, p. 15. 13 (1851); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 12. 5 (1873).

Above purplish-brown; extreme apex of head, a curved fascia commencing near lateral angles of pronotum, extending to near its anterior margin and connected centrally with its base, two short curved fasciæ at base of scutellum, two curved transverse fasciæ on disk, one about centre and the other near apex, a central line, neither reaching base nor apex, and the apical margin, body beneath, legs, rostrum, and basal joint of antennæ, ochraceous; second and third joints of the antennæ, tibiæ, tarsi, transverse lateral spots to sternum and abdomen, base of head above and anterior shadings beneath more or less metallic-greenish. Second joint of antennæ much shorter than third, remaining joints mutilated.

Length 16; width between pronotal angles 9 millim.

Hab. North India (*Brit. Mus.*).

This species was recorded by Scott as from Japan (A. M. N. H. (4) xiv, p. 289), but in error. An allied species, *P. lewisi*, occurs there.

93. **Pœcilocoris rufigenis**, *Dall. List Hem.* i, p. 14. 10 (1851); *Atk. J. A. S. B.* lvi, p. 158 (1887); *Stål* (Pœcilochroma), *En. Hem.* iii, p. 13. 14 (1873).

Ochraceous, head sometimes purplish; base and central lobe of head, a small spot near each anterior angle of pronotum, basal margin of scutellum and a spot touching lateral margin on each side near centre, transverse segmental spots to sternum and abdomen, legs, rostrum, and antennæ black or bluish-black.

Var. *a*. Two small central discal spots to scutellum near base, and another pair near apex.

Var. *b*. Like var. *a*, but with two additional discal spots to scutellum near centre.

Length 19 to 23; width between pronotal angles 11 to 13 millim.

Hab. Assam: Margherita (*Doherty*). Burma; Karennee (*Fea*).

Genus TETRARTHRIA.

Tetrarthria, *Dall. List Hem.* i, pp. 3 & 20 (1851); *Stål, Hem. Afr.* i, p. 33 (1864); *id. En. Hem.* iii, p. 8 (1873).

Type, *T. variegata*, Dall.

Distribution. Burma, Malay Archipelago, China.

Body elongate; head with the central lobe longer than the lateral ones, lateral margins sinuate; rostrum long, reaching the posterior margin of the fourth abdominal segment; antennæ of four joints, basal joint shortest, not reaching the apex of the head, remaining joints about equally long; abdomen furrowed longitudinally.

94. **Tetrarthria variegata**, *Dall. List Hem.* i, p. 20, pl. i, f. 1 (1851); *Stål, En. Hem.* iii, p. 14 (1873).

Tetrarthria marginepunctata, *Voll. Faun. Ind. Néerl.* i, p. 13, pl. i, f. 6, *a*, *b* (1863).

Tetrarthria 5-maculata, *Dohrn, Stett. ent. Zeit.* xxiv, p. 347. 2 (1863).

Tetrarthria congrua *&* lateralis, *Walk. Cat. Het.* i, pp. 20 & 21 (1867).

Tetrarthria variegata, *var.* lateralis, *Dist. A. M. N. H.* (7) iv, p. 34 (1899).

Head black, the lateral margins and two longitudinal lines brassy-green. Pronotum with a large semicircular brassy-green patch on the disk, touching the posterior margin and surrounded by a broad dull red fascia, which extends from one posterior angle to the other; four discal spots near the posterior margin and the anterior and lateral margins black. Scutellum brassy-green in the centre, the margins dull red, inwardly angulated, a black patch in the basal centre, two small spots of the same colour immediately behind it, and two large ones on the lateral margins behind the middle; a large T-shaped black patch occupies the disk of the scutellum. Abdomen beneath red, with broad black margins;

rostrum red: legs black, basal halves of femora red; antennæ black, basal joint reddish, a pale annulation near base of fourth joint.

Var. *lateralis*, Walk. (*supra*). Almost uniformly brownish above, the angulated reddish margin to the scutellum only represented by two or three luteous spots on each side.

Length 15 to 18; width between pronotal angles 7 to 8 millim.

Hab. Assam; Margherita (*Doherty*). Sylhet. Trivandrum (*Coll. Dist.*).—Also received from the Malay Peninsula and from Java, Borneo, and the Philippines.

95. **Tetrarthria varia**, *Walk. Cat.* i, p. 18 (1867).
Tethrarthria lineata, *Walk. loc. cit.*
Tethrarthria varia, *var.* lineata, *Dist. A. M. N. H.* (7) iv, p. 35 (1899).

Doubtfully distinct from varieties of the preceding species, but the pronotum and scutellum are concolorous, and the scutellum is without any marginal luteous spots.

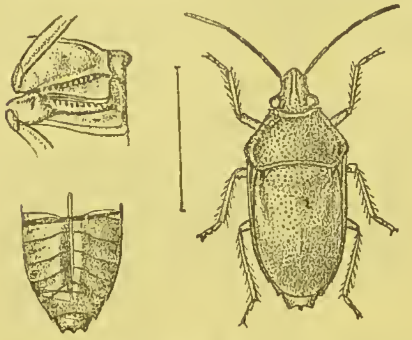

Fig. 20.
Tetrarthria varia, var. *lineata*.

Length 16; width between pronotal angles 8 millim.

Hab. Burma (*Brit. Mus.*).—Also received from Hong Kong and Malay Peninsula.

The description is taken from the var. β described by Walker as belonging to his *lineata*, which has alone been received from our faunistic region.

Genus SCUTELLERA.

Scutellera, *Lam. Syst.* p. 293 (1801); *Dall. List Hem.* i, p. 4 (1851); *Stål, Hem. Afr.* i, p. 33 (1864).
Calliphara, *Amy. & Serv. Hém.* p. 30 (1843).

Type, *S. nobilis*, Fabr.
Distribution. India, Burma, Malay Peninsula, Siam, China, Java.

Body oblong, obscurely pilose; head long, triangular, convexly and obliquely directed downwards; rostrum extending to the apex of the second abdominal segment or beyond it; mesosternum distinctly sulcated; abdomen very strongly and broadly sulcated, the sulcation narrowing towards apex.

96. **Scutellera fasciata**, *Panz.* (Cimex) *in Voet, Col.* iv, p. 108. 2, t. 46, f. 2 (1798); *Dall. List Hem.* i, p. 10. 2 (1851).
Tectocoris nepalensis, *Westw. in Hope Cat.* i, p. 14 (1837); *Germ.* (Calliphara) *Zeitschr.* i, p. 125. 4 (1839).

Callidea lanius, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 231. 1.
Scutellera amethystina, *Voll. Faun. Ind. Néerl.* i, p. 12. 2 (1863).
Stoll, Pun. ff. 49 et 251.

Body above metallic bluish-green or purplish; central lobe to head and a short fascia near inner margins of eyes, three longitudinal fasciæ to pronotum (the two outermost broken and macular) and a spot at each posterior angle, a central fascia on the scutellum narrowing to about its centre, with a spot on each side near the base, a transverse concave fascia before middle, and a convex macular fascia at about one-third from apex, also between these fasciæ a spot on each lateral margin, and the apex, dark indigo-blue or blackish; lateral margins of the pronotum and the connexivum ochraceous; body beneath, rostrum, and legs reddish-ochraceous; head excluding base, lateral areas of sternal segments, apical two-thirds of rostrum, lateral fasciæ to abdominal segments and stigmatal spots to same, apices of femora, the tibiæ and tarsi dark indigo-blue or bluish-green; basal joint of antennæ ochraceous, its apex and remaining joints blackish.

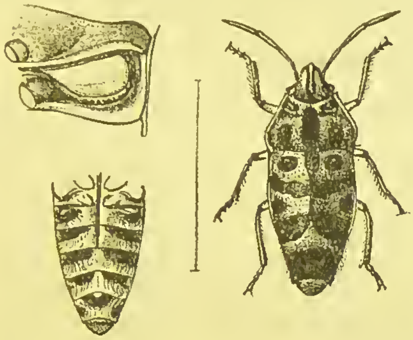

Fig. 21.—*Scutellera fasciata.*

Var. The ground-colour above, fasciæ, and spots purplish-brown.

Length 17–22; width between pronotal angles 7 to 9 millim.

Hab. Sikhim. Bombay Presidency: Belgaum. Burma: Pegu (*Coll. Dist.*).—Generally distributed in the Malayan Archipelago; received from Java, Celebes, Amboina.

97. **Scutellera nobilis**, *Fabr.* (Cimex) *Syst. Ent.* p. 697. 2 (1775); *id.* (Cimex) *Spec. Ins.* ii, p. 338. 2 (1781); *id.* (Cimex) *Mant.* ii, p. 280. 2 (1787); *id.* (Tetyra) *Syst. Rhyng.* p. 129. 6 (1803); *Lam. Hist. Nat.* iii, p. 491. 1 (1816); *Hahn* (Tectocoris), *Wanz. Ins.* iii, p. 24, f. 247 (1835); *Germ.* (Calliphara) *Zeitschr.* i, p. 124. 2 (1839); *Atk. J. A. S. B.* lvi, 2, p. 161 (1887).
Tectocoris perplexa, *Westw. in Hope Cat.* i, p. 4 (1837); *Kirby* (Callidea), *J. Linn. Soc., Zool.* xxiv, p. 75 (1891).

Allied to the preceding species, *S. fasciata*, but differing in the absence of the transverse fasciæ above; the scutellum has usually the central fascia indistinct or obsolete, but bears six small discal spots arranged in pairs, and a lateral spot on each side near the centre.

Length 17 to 21; width between pronotal angles 7 to 9 millim.

Hab. Sind (*Coll. Dist.*); Karachi (*Ind. Mus.*). Dehra (*Ind. Mus.*). Assam; Manipur (*Ind. Mus.*); North-east Frontier (*Chennell*). Bombay (*Leith*); Calcutta; Malabar; Trivandrum;

Nilgiri Hills (*Hampson*); Madras (*Ind. Mus.*); Bangalore (*Ind. Mus.*). Ceylon (*Green*). Tenasserim: Moulmein (*Fea*), Tavoy (*Ind. Mus.*).—The species is also found in China.

S. nobilis, like *S. fasciata*, varies in coloration from bluish-green to purplish-brown, and this change of hue may represent developmental changes. I possess a ticket on one of Dr. Leith's Bombay specimens: "At last ecdesis, the integument bright red, changing in patches to purple, blue, and finally green."

Genus BRACHYAULAX.

Brachyaulax, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 616; *id. En. Hem.* iii, p. 9 (1873).

Type, *B. rufo-maculata*, Stål.—A species from the Philippines.

Distribution. India, Burma, Malay Peninsula, China, Java.

Allied to the preceding genus *Scutellera*, from which it differs principally by the shorter and smaller odoriferous apertures, and by having the abdomen only sulcated at the base. The pronotum is very distinctly transversely impressed before its centre.

98. **Brachyaulax oblonga**, *Westw.* (Tectocoris) *in Hope Cat.* i, p. 14 (1837); *Germ.* (Calliphara) *Zeitschr.* i, p. 129 (1839); *Dall.* (Scutellera) *List Hem.* i. p. 19. 8 (1851); *Dist. A. M. N. H.* (7) iv, p. 35 (1899).

Scutellera cyaneovitta, maculigera, & buprestoides, *Walk. Cat. Het.* i, p. 16 (1867).

Scutellera pubescens, *Walk. op. cit.* iii, p. 507 (1868).

Bluish-green or indigo-blue; antennæ, central lobe of head, and a spot at the area of each eye, six spots on the pronotum arranged in two transverse series, the posterior largest, ten spots on the scutellum—three basal, the middle one linear and elongated, two before the middle, sometimes attached to the lateral margins and sometimes connected, two small and lateral, sometimes connected with the preceding, two a little before apex sometimes connected, and one subapical,—black; lateral margins of the pronotum and sternum (sometimes absent), lateral margins and a central basal discal patch to abdomen irregularly ochraceous or reddish-ochraceous, the basal ochraceous space generally black-spotted. The transverse impression and the anterior margin to the pronotum are very coarsely punctate.

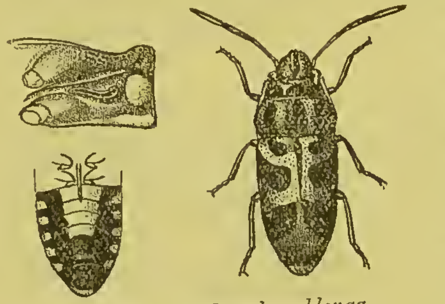

Fig. 22.—*Brachyaulax oblonga.*

Length $13\frac{1}{2}$ to $14\frac{1}{2}$ millim.

Hab. Sikhim. North Khási Hills (*Chennell*); Nága Hills (*Doherty*). Burma: Bhamo, Mitanga (*Fea*).—Also Malay Peninsula, Java, and China.

Genus CALLIPHARA.

Calliphara, part., *Germ. Zeitschr.* i, p. 122 (1839).
Calliphara, *Stål, Hem. Afr.* i, p. 34 (1864); *id. En. Hem.* iii, p. 9 (1873).
Lamprophara, *Stål, Hem. Afr.* i, p. 34 (1864).

Type, *C. nobilis*, Linn.
Distribution. India, Burma, Malay Peninsula, Malayan Archipelago, Australasia, China.

In this genus the abdomen is not sulcated, and the scutellum does not quite cover the abdomen, the connexivum being exposed.

99. **Calliphara nobilis**, *Linn.* (Cimex) *Cent. Ins.* p. 17. 46 (1763); *id.* (Cimex) *Amœn.* 6, p. 400. 46 (1763); *Dall.* (Callidea) *List Hem* i, p. 32. 26 (1851); *Stål, En. Hem.* iii, p. 17 (1873).
Cimex pustulatus, *Panz. in Voet, Col.* iv, p. 111. 11, pl. 47, f. 11 (1798).
Scutellera buquetii, *Guér. Voy. Coq., Ins.* pp. 159 & 162 (1830).

Shining pale green, sometimes with violet reflexions; eyes, two spots at base of head and margins of central lobe, a series of three transverse spots on the pronotum near anterior margin, (sometimes only two) and four spots across disk, seven spots on the scutellum, of which six are arranged in pairs and the seventh subapical (in some specimens an additional central linear spot), and the body beneath ochraceous; the sternum and lateral areas of the abdomen bright metallic green shaded with piceous; lateral margins of the sternum and abdomen dark ochraceous or violaceous; coxæ and femora ochraceous; apices of femora, the tibiæ and tarsi, rostrum and antennæ dark indigo-blue or piceous.

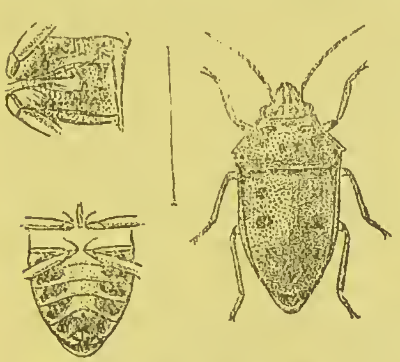

Fig. 23.—*Calliphara nobilis.*

Length 15 to 18; width between pronotal angles 8 to 9 millim.

Hab. Burma: Rangoon (*Coll. Dist.*). Tenasserim: Amherst (*Brit. Mus.*).—This species occurs in the Malay Peninsula, is widely distributed throughout the Malayan Archipelago, and has been received from Hong Kong and Formosa.

100. **Calliphara excellens**, *Burm.* (Tetyra) *Nov. Act. Acad. Leop.* 16, *Suppl.* i, p. 287. 5, t. 41, f. 2 (1834); *Amy. & Serv.* (Callidea) *Hém.* p. 32. 1 (1843); *Stål, Berl. ent. Zeitschr.* x, p. 153. 6 (1866); *Dist. A. M. N. H.* (7) iv, p. 38 (1899).
Tectocoris obscura, *Westw. in Hope Cat.* i, p. 14 (1837).
Callidea nobilis, *Germ. Zeitschr.* i, p. 117. 12 (1839).
Callidea praslinia, *Dall. List Hem.* i, p. 24. 10 (1851).

Dark indigo-blue, becoming greenish on scutellum; lateral lobe

to head, three large discal spots to pronotum, seven spots to scutellum, arranged six in pairs and one subapical, antennæ, legs, rostrum, and stigmatal spots to abdomen dark indigo-blue or black; coxæ, bases of anterior femora, intermediate and posterior femora, excluding apices, reddish-ochraceous.

Length 18 to 20; width between pronotal angles 9 to 10 millim.

Hab. Nepal (*Hope Coll. Oxford*).—The British Museum possesses specimens from Hong Kong; it is a common species in the Philippines, and not uncommon in Celebes.

Genus **CHRYSOCORIS.**

Chrysocoris, *Hahn, Wanz. Ins.* ii, p. 38 (1834); *Stål, Hem. Afr.* i, p. 34 (1864); *id. En. Hém.* iii, p. 9 (1873).
Callidea, *Amy. & Serv. Hém.* p. 31 (1843).
Eucorysses, *Amy. & Serv. loc. cit.*; *Stål, Hem. Afr.* i, p. 34 (1864).
Galostha, *Amy. & Serv. loc. cit.* p. 33.
Cosmocoris, *Stål, Hem. Afr.* i, p. 34 (1864).

Type, *C. dilaticollis*, Guér.

Distribution. India, Burma, Malay Peninsula, Malayan Archipelago, China.

Closely allied to *Calliphara*, but the scutellum completely covers the abdomen except at base.

The genus is a large one and readily, as pointed out by Stål, breaks up into three main divisions.

I. Head somewhat large, moderately oblique, its lateral margins moderately sinuate; anterior lateral margins of the pronotum straight or almost so; base of the scutellum not or obsoletely elevated; tibia entirely sulcated. (*Eucorysses.*)

101. **Chrysocoris grandis**, *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 31, t. 2, f. 46 (1783); *Germ.* (Calliphara) *Zeitschr.* i, p. 128. 13 (1839); *Dall.* (Callidea) *List Hem.* i, p. 23. 4 (1851).
Eucorysses superbus, *Uhler, Proc. Ac. N. S. Phil.* 1860, p. 221.
Callidea distinguenda, *Uhler, op. cit.* 1861, p. 286.
Var. *a.* Cimex baro, *Fabr. Ent. Syst., Suppl.* p. 528. 7–8 (1798); *id.* (Tetyra) *Syst. Rhyng.* p. 129. 3 (1803); *Germ.* (Calliphara) *Zeitschr.* i, p. 127. 11 (1839); *Dall.* (Callidea) *List Hem.* i, p. 22. 3 (1851).
Tetrarthria tetraspila, *Walk. Cat. Het.* i, p. 19. 3 (1867).
Var. *b.* Eucorysses pallens, *Amy. & Serv. Hém.* p. 31. 1, pl. i, f. 4 1843).
Callidea baro, *Voll. Faun. Ind. Néerl.* i, p. 17. 3 (1863).
Eucorysses grandis, *Stål, Berl. ent. Zeitschr.* x, p. 154 (1866).

Above reddish-ochraceous; central lobe and base of head, an anterior subquadrate spot on pronotum and a spot near each posterior angle, base of scutellum, narrowly widened at lateral angles, three spots on disk, the central one largest and most anterior, an irregular transverse fascia beyond these spots, and an apical spot, black: abdomen beneath violaceous; head, sternum, antennæ, rostrum, legs, and fasciæ to abdomen beneath black; margins of head beneath reddish-ochraceous.

Var. *a*. Paler ochraceous, pronotum with the spots smaller and the basal ones often obsolete; scutellum with the three discal spots, the anterior one smaller and the lateral ones more transverse, the fascia and apical spot wanting; two lateral ochraceous spots to prosternum and one to metasternum. (*C. baro*, Fabr.)

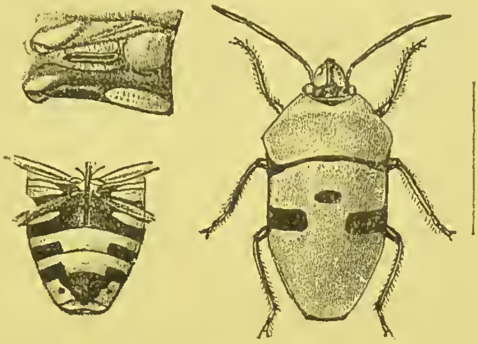

Fig. 24.—*Chrysocoris grandis*, var. *b*. *pallens*.

Var. *b*. Differing from var. *a* by the absence of any markings to the pronotum, the central spot to the scutellum is also frequently absent.

Length 18 to 24; width between pronotal angles 9 to 13 millim.

Hab. Sikhim. Assam: Margherita (*Doherty*); North Khási Hills (*Chennell*); Nága Hills (*Ind. Mus.*). Burma: Bhamo, Karennee, Mt. Mooleyit (*Fea*).—Also recorded from China and Japan. I have received the species from Java.

The vars. *a* and *b* are alone known to me from our Indian region. The typical form of the species I have received from Japan *.

102. **Chrysocoris superbus**, *Dall.* (Callidea) *List Hem.* i, p. 23. 6 (1851); *Kirby* (Callidea), *J. Linn. Soc., Zool.* xxiv, p. 76 (1891); *Stål* (Chrysocoris (Eucorysses)) *En. Hem.* iii, p. 18. 1 (1873).

Dark indigo-blue; central lobe of head and inner margins of eyes, posterior margin of pronotum, also three central longitudinal fasciæ, of which the two outermost are broken and macular, a spot at each lateral angle, and seven large transverse spots (arranged six in pairs and one subapical) on the scutellum, legs, antennæ, and rostrum black; abdomen beneath ochraceous, its lateral and apical margins bluish, the stigmatal spots and a central transverse linear spot on each segment black; coxæ, base of head beneath, and base of rostrum luteous; area of the odoriferous apertures dull black. Second joint of the antennæ almost as long as the third.

Length 19 to 23: width between pronotal angles 10 to 11 millim.

Hab. Malabar (*Coll. Dist.*). Ceylon: Peradeniya (*E. Green*).

* An allied species, *C. iris*, Germ., has been stated by Atkinson to be recorded from Tenasserim, but I can find no confirmation of this habitat.

103. **Chrysocoris spilogaster**, *Walk.* (Callidea) *Cat. Het.* i, p. 30. 22 (1867); *Kirby* (Callidea), *J. Linn. Soc., Zool.* xxiv, p. 76 (1891); *Dist. A. M. N. H.* (7) iv, p. 38 (1899).

Closely allied to the preceding species, *C. superbus*, but differing by having two series of central linear spots on the abdominal segments, situate one on each side of the central area instead of one central series as in Dallas's species, while the second joint of the antennæ is distinctly shorter than the third.

Length 17; width between pronotal angles 9 millim.

Hab. Ceylon (*Brit. Mus.*).

II. Head somewhat large, moderately oblique; pronotum with the anterior lateral margins more or less distinctly sinuated about centre; scutellum transversely elevated at base; tibiæ above flat or sulcated towards the apex. (*Cosmocoris.*)

104. **Chrysocoris nicobarensis**, *Dist. Entomologist*, xxv, *Suppl.* p. 96 (1892).

Above shining golden-green; the head, anterior and lateral margins of pronotum bluish; the discal and apical area of scutellum bronzy; pronotum with a longitudinal series of three black spots on each lateral area, and a central lanceolate black spot at base; scutellum with six black spots, three on each side, the last pair somewhat close together a little before apex: body beneath shining bluish-green, the abdomen a little paler in hue; legs dark bluish, tarsi almost black; coxæ and a spot at base of head luteous; stigmata black. Antennæ with the first and second joints bluish, the third black; remaining joints mutilated.

Length 17; width between pronotal angles 9 millim.

Hab. Nicobar Islands (*Coll. Dist.*) *.

III. Head somewhat small, strongly obliquely deflected, its lateral margins generally strongly sinuated; basal area of the scutellum not or only slightly elevated; tibiæ above towards the apex flat or sulcated. (*Chrysocoris*, Hahn.)

A. *Lateral margins of the pronotum obtuse, not laminately rounded and produced.*

a. *Abdomen beneath without any luteous markings.*

105. **Chrysocoris atriventris**, *Atk. Proc. A. S. B.* 1887, p. 11.

Above obscure brassy-green; base of central lobe to head, a transverse series of three spots near anterior margin of pronotum, three larger spots near base, and a spot near each lateral angle, six spots on scutellum arranged in pairs and a central spot

* An allied species, *C. coxalis*, Stål, has been included by Atkinson in his "Notes on Indian Rhynchota," and a locality given as "Tenasserim (?)." This at present is uncorroborated.

on disk, abdomen beneath, legs, rostrum, and antennæ black; a spot near each coxa brassy-green.

Length 14; width between pronotal angles 8½ millim.

Hab. Delhi (*Atkinson*).

b. *Abdomen more or less luteous or ochraceous.*

106. **Chrysocoris stockerus**, *Linn.* (Cimex) *Mus. Lud. Ulr.* p. 167. 1 (1764); *Dall.* (Callidea) *List Hem.* i, p. 27. 18 (1851); *Stål, En. Hem.* iii, p. 20 (1873).

Callidea taprobanensis, *Westw. in Hope Cat.* i, p. 15 (1837).

Callidea erichsoni, *Germ. Zeitschr.* i, p. 113. 5 (1839); *Stål* (Chrysocoris), *Hem. Fabr.* i, p. 11. 4 (1868); *Kirby, J. Linn. Soc., Zool.* xxiv, p. 75 (1891).

Chrysocoris elatus, *Stål, Hem. Fabr.* i, p. 11. 3 (1868).

Stoll, Pun. f. 172 A.

Bluish or brassy-green above; head with the base of the central lobe, a transverse series of three spots on pronotum near anterior margin, three larger discal spots near base, and a spot at each lateral angle, six discal spots arranged in pairs on scutellum and a central elongate spot on disk black. Head beneath and sternum shining brassy-green; basal margin of head, coxæ, posterior margins of meso- and metasterna, legs, and abdomen ochraceous; apices of femora, the tibiæ and tarsi, a large quadrate spot at base, stigmatal spots, inner lateral spots, and apex of abdomen black; antennæ black, base of first joint ochraceous; rostrum piceous, its base ochraceous.

Length 12 to 14; width between pronotal angles 7 to 7½ millim.

Hab. Bombay (*Leith*); Bangalore; Malabar; Trivandrum; Ceylon (*Green & Lewis*).—This is an abundant and common species in Ceylon, where Mr. E. E. Green has described it as found swarming on trees (*Phyllanthus* sp.) and sucking the berries.

107. **Chrysocoris patricius**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 527. 3–4 (1798); *id.* (Tetyra) *Syst. Rhyng.* p. 131. 15 (1803); *Guér.* (Scutellera) *Voy. Coq., Ins.* p. 159. 6 (1830); *Germ.* (Callidea) *Zeitschr.* i, p. 121. 21 (1839); *Stål, Hem. Fabr.* i, p. 11. 2 & 5 (1868).

Callidea bengalensis, *Westw. in Hope Cat.* i, p. 15 (1837); *Kirby, J. Linn. Soc., Zool.* xxiv, p. 75 (1891).

Callidea basilica, *Germ. Zeitschr.* i, p. 117. 11 (1839).

Chrysocoris fabricius, *Atk. J. A. S. B.* lvi, p. 172 (1887).

Stoll, Pun. f. 222 A.

Bluish-green: central lobe to head, eight spots to pronotum (situate three near anterior margin, three across disk, and one at each lateral angle), seven spots to scutellum (arranged six in pairs and one central and elongate), and the abdomen beneath ochraceous, base and apex broadly black: lateral margins to the stigmata violaceous; transverse elongate black stigmatal spots more or less shaded with bluish or brassy-green; legs, rostrum, and antennæ bluish-black, coxæ more or less ochraceous.

Length 8 to 10; width between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. Ceylon. Manipur (*Coll. Dist.*); N. Khási Hills (*Chennell*). Burma; Karen Hills (*Doherty*).

A species in this division to be recognized from those previously described by its small size.

108. **Chrysocoris purpureus**, *Westw.* (Callidea) *in Hope Cat.* i, p. 15 (1837); *Stål, Hem. Fabr.* i, p. 10. 1 & p. 11. 6 (1868); *Dist. A. M. N. H.* (7) iv, p. 39 (1899).
Cimex stockerus, *Fabr. Syst. Ent.* p. 696. 1 (1775); *id.* (Tetyra) *Syst. Rhyng.* p. 131. 12 (1803); *Latr.* (Scutellera) *Gen.* iii, p. 113. 2 (1807); *Burm.* (Callidea) *Handb.* ii, 1, p. 394. 3 (1835).
Chrysocoris viridis, *Atk. J. A. S. B.* lvi, p. 175 (1887).

Above bluish- or purplish-green; five spots on pronotum, two anterior and three on posterior disk, seven spots on scutellum, six arranged in pairs and one (elongate) on anterior disk, and antennæ black; in some purplish specimens these spots are almost obsolete. Body beneath, base of first joint of antennæ, and femora ochraceous, lateral margins of the abdomen purplish; head beneath (excluding base), marginal spots on sternal segments, stigmatal spots, apices of femora, the tibiæ and tarsi, and third and fourth joints of rostrum bluish-black; a central spot to sternum, and sometimes one at base and apex of abdomen, piceous.

Length 15 to 17; width between pronotal angles $8\frac{1}{2}$ to 9 millim.

Hab. Bombay (*Leith*); Dhárwar; Bangalore; Secunderabad (*Coll. Dist.*); Madras.

Mr. R. M. Dixon, of Bombay, informs me that the larvæ are almost odourless. The insect is sparingly found in the cold season, but is plentiful in the spring and summer. Common in Western India.

109. **Chrysocoris stollii**, *Wolff* (Cimex), *Ic.* ii, p. 48. 45, f. 45 (1801); *Germ.* (Callidea) *Zeitschr.* i, p. 114. 7 (1839); *Stål, Hem. Fabr.* i, p. 11. 8 (1868); *Dist. A. M. N. H.* (7) iv, p. 39 (1899).
Scutellera stockerus, *Guér. Voy. Coq., Ins.* p. 159. 5 & p. 161 (1830).
Callidea porphyricola, *Walk. Cat. Het.* i, p. 29. 19 (1867).

Closely allied to *C. purpureus*, especially on the underside, but differing by its smaller size and the number and arrangement of the spots above. The colour is either bluish-green or purplish; pronotum with eight spots, three near anterior margin, three larger on posterior disk, and one on each lateral angle; scutellum with seven spots (six arranged in pairs, one central, large, subovate on anterior disk) and the apex either black in bluish-green specimens or dark purple in purplish examples.

Length 13 to $14\frac{1}{2}$; width between pronotal angles 7 to 8 millim.

Hab. Delhi; Karachi; Calcutta. Sikhim. Assam; Nága Hills (*Doherty*); N. Khási and East Gáro Hills (*Chennell*); Margherita (*Doherty*). Nicobar Islands (*Ind. Mus.*). Burma: Bhamo, Toungoo, Karennee, Palon (*Fea*). Tenasserim: Myitta (*Doherty*), Thagata and Malewoon (*Fea*).—Also received from Formosa and N. China.

110. **Chrysocoris ornatus**, *Dall.* (Callidea) *List Hem.* i, p. 27. 17 (1851); *Stål, En. Hem.* iii, p. 21. 19 (1873).

Above purplish-red, shining brassy-green on anterior disk of pronotum and base of scutellum; head violaceous blue; seven spots on pronotum, three (smaller) near anterior margin, three (largest and sometimes confluent) on posterior disk, and one at each lateral angle, five spots on scutellum, one obovate on disk, one on each side of this, and two before apex, dark purplish-blue; antennæ, legs, and rostrum black; sternum bluish-green; abdomen pale purplish-red, with a submarginal series of linear transverse stigmatal spots, the apex more or less piceous.

Length 13; width between pronotal angles 7 millim.

Hab. Assam (*Stockholm Mus.*).—I have also received the species from Perak in the Malay Peninsula, and from China.

111. **Chrysocoris marginellus**, *Westw.* (Callidea) *in Hope, Cat.* i, p. 15 (1837); *Stål, Hem. Fabr.* i, p. 12. 9 (1868).

Callidea cœlestis, *Stål, Öfv. Vet.-Akad. Förh.* 1855, p. 181. 1; *id. op. cit.* 1856, p. 52. 1.

Chrysocoris nilgiriensis, *Atk. J. A. S. B.* lvii, p. 343 (1889).

Above bluish-green; nine or eleven spots on pronotum (arranged three or five anteriorly and six posteriorly) and eight spots on scutellum (arranged six in pairs, one subapical, and one elongate and discal) black: abdomen beneath, coxæ, femora, base of rostrum, and a central line to sternum ochraceous or reddish-ochraceous; lateral margins of abdomen reddish or violaceous; sternum and a submarginal abdominal series of broad transverse spots greenish or bluish-green; antennæ, rostrum, apices of femora, the tibiæ, tarsi, and a large spot at base and apex of abdomen black.

The spots above are inconstant in number, but the species can be easily recognized by the markings to the underside of the abdomen.

Length 14 to 17; width between pronotal angles 8 to 9½ millim.

Hab. Bombay (*Leith*); Nilgiri Hills (*Hampson*); Madras. Andaman Islands.

112. **Chrysocoris simplex**, *Atk. J. A. S. B.* lvii, p. 343 (1889).

Above dark indigo-blue or brassy-green, coarsely and distinctly punctate; pronotum with two spots near anterior margin, scutellum with six spots, often very obscure, arranged in pairs, black; abdomen beneath ochraceous; sternum, legs, a large basal spot, apical segment, anal appendage, and a lateral series of large ray-like spots to abdomen dark indigo-blue; stigmatal spots black.

Length 12 to 13; width between pronotal angles 7 to 7½ millim.

Hab. Nilgiri Hills: Ootacamund; Coonoor (*Atkinson Coll.*).

113. **Chrysocoris pulchellus**, *Dall.* (Callidea) *List Hem.* i, p. 25. 13 (1851).

Var. Callidea rama, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 76, pl. iv, f. 3 (1891).

Bright bluish- or brassy-green; central lobe to head, three

anterior spots and six larger posterior discal spots on pronotum, of which the two central are subquadrate and close together and the two outermost at lateral angles are smallest, two transverse spots at base of scutellum, followed by two rounded spots on each lateral area, a central discal somewhat wedge-shaped spot and a rounded or transverse spot before apex, black; antennæ, rostrum, and sternum blackish, margins of sternum brassy-green; base of head beneath and abdomen ochraceous, the last with a large spot at base and the greater portion of apical segment black; large oblique stigmatal spots black, shaded with brassy-green; lateral margins of the abdomen pale purplish; femora reddish-ochraceous, their apices, the tibiæ, and tarsi black.

Length 13 to 14; width between pronotal angles $6\frac{1}{2}$ to $7\frac{1}{2}$ millim.

Hab. Sylhet (*Brit. Mus.*). Ceylon (*E. Green*).

The variety described by Kirby is slightly larger than the typical form described by Dallas; the apical spot to the scutellum is also smaller and less transverse.

114. **Chrysocoris andamanensis,** *Atkinson, Proc. A. S. B.* 1887, p. 12; *id. J. A. S. B.* lvi, p. 177. 93 (1887).

Above bluish-green; base of first joint of antennæ, eyes, apical margin to scutellum, body beneath, and legs ochraceous; head beneath excluding base, sternal lateral margins and parts of sternal lateral areas, a submarginal series of oblique spots to abdomen, apices of the femora, the tibiæ and tarsi dark indigo-blue; antennæ piceous; pronotum with six spots, three submarginal and three large and elongate on posterior disk (these last have sometimes the two outermost spots broken and duplex), scutellum with seven spots, six in pairs and one discal and elongate, black.

Length 15 to 18; width between pronotal angles 8 to 9 millim.

Hab. Bangalore (*Coll. Dist.*). Andaman Islands: Port Blair (*Meldola*). Rangoon (*Coll. Dist.*).

The size and the ochraceous apical margin of the scutellum render the identification of this species very simple.

B. *Pronotum with a deep transverse incision near the anterior margin.*

115. **Chrysocoris fascialis,** *White* (Callidea), *Tr. E. S.* iii, p. 86 (1842).

Head bluish-green; a spot on each side of apex to central lobe of head, eyes, pronotum, scutellum, and body beneath ochraceous; central lobe to head excluding base, a spot at inner margin of each eye, a transverse anterior fascia to pronotum connected with a central subquadrate spot usually reaching base, a basal spot on each side of this and a smaller spot in each lateral angle, a

transverse basal fascia on scutellum and six spots (one discal, obconical, and subbasal, four arranged in pairs, and one subapical), apices of femora, the tibiæ and tarsi, rostrum, antennæ, some lateral streaks to sternum, a transverse spot at base of abdomen, and nearly the whole of the apical segment, black; lateral margins of abdomen violaceous; stigmatal spots black, inwardly margined with greenish and connected on the third, fourth, and fifth segments with an inner transverse black spot: head beneath, excluding base, and the areæ of the coxæ metallic green tinged with violaceous.

Length $9\frac{1}{2}$ to 10; width between pronotal angles 5 millim.

Hab. Sikhim (*Ind. Mus.*). Assam: Nága Hills (*Doherty*); Margherita (*Ind. Mus.*). Burma: Karennee (*Fea*).

A small species, to be recognized by its unique coloration and by the deep transverse incision to the pronotum.

C. *Lateral margins of the pronotum laminately produced and rounded.*

a. *Abdomen beneath dark, without ochraceous discal area.*

116. **Chrysocoris eques**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 79. 2 (1794); *id.* (Tetyra) *Syst. Rhyng.* p. 131. 13 (1803); *Guér.* (Scutellera) *Voy. Coq., Zool.* p. 158. 3 (1830); *Burm.* (Callidea) *Handb.* 2, 1, p. 394. 1 (1835); *Dall. List Hem.* i, p. 28. 25 (1851); *Amy. & Serv.* (Galostha) *Hém.* p. 33. 1 (1843); *Stål, Hem. Fabr.* i, p. 11. 3 & p. 12. 12 (1868); *Atk. J. A. S. B.* lvi, p. 179 (1887).
Var. *a.* Callidea schwaneri, *Voll. Faun. Ind. Néerl.* i, p. 26. 18, pl. 2, f. 7 (1863).
Var. *b.* Var. nicobarensis, *Atk. Proc. A. S. B.* 1887, p. 13.
Var. *c.* Callidea formosa, *Westw. in Hope Cat. Hem.* i, p. 15 (1837).
Callidea dorsalis, *White in Gray's Zool. Misc.* p. 80 (1842).

Greenish or bluish above; central fascia to head, sometimes bifurcating towards the apex, and generally a spot before each eye, a central fascia on pronotum, generally broken and forming two spots, followed on each side by two similar spots, sometimes three, an anterior lateral streak and a spot at each lateral angle, on scutellum a small central basal spot, a discal anteriorly bifurcating spot, three spots on each side, and a subapical spot, all black; discal area of body beneath dark bluish or blackish, lateral areas greenish; stigmatal spots, antennæ, and rostrum black; legs dark bluish-green.

Var. *a.* is a local Bornean race and need not be described here.

Var. *b.* Nicobarian race; usually larger and more brassy-green. In an Andaman specimen agreeing with this race small portions of the disks of the fourth and fifth abdominal segments are ochraceous, thus approaching *C. dilaticollis*, Guér.

Var. *c.* Not apparently represented in our fauna.

Length 11 to 14; width between pronotal angles 6 to 8 millim.

Hab. Nicobar Islands: Camorta (*Meldola*). Andaman Islands (*Coll. Dist.*). Burma: Karennee (*Fea*). Tenasserim; Myitta (*Doherty*), Mergui (*Ind. Mus.*).—In its typical form this species is found in the Malay Peninsula and North Borneo. In its varietal forms it is recorded from Java, Borneo, and China.

b. *Abdomen beneath with ochraceous discal area.*

117. **Chrysocoris dilaticollis**, *Guér.* (Scutellera) *Voy. Coq., Zool.* p. 160. 11 & p. 164 (1830); *Dall.* (Callidea) *List Hem.* i, p. 28. 26 (1851); *Stål, En. Hem.* iii, p. 21 (1873).
Chrysocoris stolii, *Hahn, Wanz. Ins.* ii, p. 39, f. 136 (1834).
Callidea abdominalis, *Westw. in Hope Cat.* i, p. 15 (1837).
Galostha stockerus, *Amy. & Serv. Hém.* p. 34. 2 (1843); *Stål* (Callidea), *Öfv. Vet.-Ak. Förh.* 1855, p. 389; *id.* (Chrysocoris) *Hem. Fabr.* i, p. 12. 10 (1868).
Var. Callidea sumatrana, *Voll. Faun. Ind. Néerl.* i, p. 28. 20, pl. 2, f. 9 (1863).

Allied to *C. eques*, but differing always by having the abdomen more or less ochraceous beneath. Head usually without the median black fascia; pronotum with three spots near anterior margin, three, sometimes five, on posterior disk, an anterior lateral streak, and a spot at each lateral angle black; scutellum spotted as in *C. eques*; abdomen, coxæ, and legs ochraceous; apices of femora, the tibiæ and tarsi, a large spot at base of abdomen, the apical segment and anal appendage black; lateral margins of abdomen broadly bluish, with inward ray-like continuations and the stigmatal spots black.

Var. Femora only ochraceous at the base, and the ochraceous coloration of the abdomen beneath reduced to the disks of the fourth and fifth segments.

Length 11 to 12½; width between pronotal angles 6 to 7 millim.

Hab. Arakan; Moulmein; Mergui.—The species is also widely distributed in the Malay Archipelago and has been received from Hong Kong. The varietal form appears to occur in our area.

Genus **LAMPROCORIS**.

Lamprocoris, *Stål, Hem. Afr.* i, p. 34 (1864); *id. En. Hem.* iii, p. 9 (1873).
Sophela, *Walk. Cat. Het.* i, p. 17 (1867).

Type, *L. lateralis*, Guér.

Distribution. India, Burma, the Malay Peninsula, Java, Sumatra.

In this genus the third joint of the antennæ is longer than the second, but not twice or more than twice its length as in *Calliphara* and *Chrysocoris*; the tibiæ are cylindrical, being neither flattened nor furrowed above; the anterior margin of the basal angles of the scutellum subreflexed.

A. *Lateral angles of the pronotum unarmed.*

118. **Lamprocoris lateralis**, *Guér.* (Scutellera) *Voy. Coq., Zool.* p. 159. 4 & p. 160 (1830); *Dall.* (Callidea) *List Hem.* i, p. 28. 24 (1851); *Stål, En. Hem.* iii, p. 22. 1 (1873); *Dist. A. M. N. H.* (7) iv, p. 39 (1899).
Callidea contraria, *Walk. Cat. Het.* i, p. 30. 21 (1867).

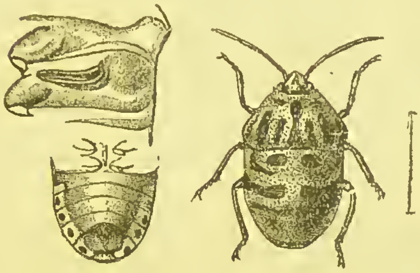

Fig. 25.—*Lamprocoris lateralis.*

Above indigo-blue or metallic-green; central lobe of head and a spot at inner margin of each eye, a spot near each anterior angle of pronotum, and a central linear fascia not reaching anterior margin, on each side of which are three oblique linear spots, five spots near base of scutellum (two central, one discal, and two linear and somewhat crescentic), four spots, sometimes amalgamated into two, across centre, followed by a transverse fascia and by two, sometimes three, spots, all black. Body beneath and legs indigo-blue or metallic-green; the lateral abdominal margins broadly ochraceous, with the stigmatal spots black.

Length 9 to 10; width between pronotal angles 6 to 7 millim.

Hab. Nága Hills (*Doherty*). Burma: Karennee (*Fea*).—The species appears to be moderately common in Java, and has also been received from Sumatra.

119. **Lamprocoris roylii**, *Westw.* (Callidea) *in Hope Cat.* i, p. 16 (1837); *Stål, En. Hem.* iii, p. 22. 3 (1873); *Dist. A. M. N. H.* (7) iv, p. 39 (1899).
Callidea histeroides, scripta, & gibbula, *Walk. Cat.* i, pp. 28. 29. 16, 17, 18 (1867).

Brassy-green with a metallic gloss and some reddish reflexions; lateral lobe to head and a spot at inner margin of each eye, a broad central fascia on pronotum, a broken macular fascia on each side of this and a spot near each lateral angle, with three central basal spots on scutellum, the central one discal, a curved fascia slightly broken on disk, followed by three spots (one subapical, and two on each posterior lateral margin), dark indigo-blue or blackish. Abdomen beneath with the lateral margin ochraceous and deeply notched internally; anterior margins of the abdominal segments, antennæ, and rostrum blackish.

Length $9\frac{1}{2}$ to 10; width between pronotal angles 6 to $6\frac{1}{2}$ millim.

Hab. Nepal (*Coll. Dist.*). Sikhim. Khási Hills; Nága Hills.

B. *Lateral angles of the pronotum produced in small acute spines.*

120. **Lamprocoris spiniger**, *Dall.* (Callidea) *Tr. E. S.* v, p. 186. 1, pl. 19, f. 1 (1849); *Walk.* (Sophela) *Cat. Het.* i, p. 18 (1867); *Stål* (Sophela), *En. Hem.* iii, p. 22 (1873).

Ochraceous, reddish-ochraceous, or violaceous; thickly punctate above; head (sometimes anterior margin of pronotum), body beneath, and legs dark violaceous; lateral margins of the abdomen reddish-ochraceous, more or less internally notched; lateral margins of the sternum and apex of the abdomen sometimes reddish-ochraceous; antennæ and rostrum blackish.

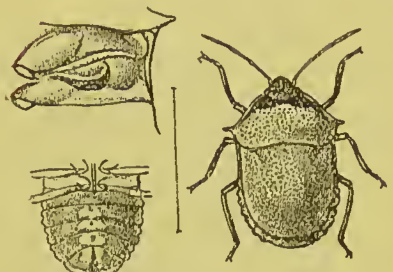

Fig. 26.—*Lamprocoris spiniger.*

Length 19 to 21; width between pronotal angles 10 to 11 millim.

Hab. Sikhim; Bhutan; Khási and Nága Hills. Burma: Ruby Mines (*Doherty*); Kakhyen Kauri (*Fea*).

Genus FITHA.

Fitha, *Walk. Cat. Het.* i, p. 45 (1867).

Type, *F. ardens*, Walk.

Distribution. At present only recorded from India.

This genus is to be recognized by the four-jointed antennæ, which separate it from the preceding genera, excepting *Tetrarthia*, from which it differs by the non-furrowed abdomen.

121. **Fitha ardens**, *Walk. Cat. Het.* i, p. 45. 1 (1867).

Gilded green, elliptical, coarsely punctured. Head with two longitudinal furrows. Antennæ black, first joint with the base reddish. Pronotum with six purple spots and a similar spot near each lateral angle. Scutellum with the following purple spots—one central basal, one elongate and discal, three on each lateral area, and one subapical. Sternum with a transverse yellow streak on each side. Abdomen beneath with a bright purple stripe along each side, and with a yellow patch on the disk. Legs red; tibiæ and apices of femora blackish-green; tarsi black.

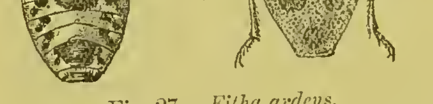

Fig. 27.—*Fitha ardens.*

Length 8 millim.

Hab. "Hindostan," (*Brit. Mus.*).

This species is only known to me by the unique type in the British Museum. I have here largely copied Walker's description.

Division *TETYRARIA*.

Tetyraria, *Stål, En. Hem.* iii, p. 3 (1873).

Thorax and scutellum at base conjointly and gradually longitudinally convex, seldom slightly convexly inclined; base of pronotum somewhat posteriorly produced between the basal angles of the scutellum.

This division is largely distributed in the Ethiopian Region, but its two Old-World genera are both represented in the Indian fauna.

A. Head long, central lobe acuminately produced. Lateral pronotal angles produced and more or less acuminate .... HOTEA, p. 65.
B. Head with the central lobe not acuminately produced. Lateral pronotal angles not produced .... DEROPLAX, p. 66.

Genus HOTEA.

Hotea, *Amy. & Serv. Hém.* p. 41 (1843); *Dall. List Hem.* i, p. 5 (1851); *Stål, Hem. Afr.* i, pp. 35 & 53 (1864); *id. En. Hem.* iii, p. 24 (1873).

Type, *H. gambiæ*, Westw. An African species.

Distribution. India, Burma, Malay Peninsula, China, Malayan Archipelago, Central and South Africa, and Madagascar.

Body convex both above and beneath; head convex, with the median lobe produced at apex; second and third joints of the antennæ subequal in length or the second a little longer than the third; pronotum sexangular, its anterior lateral margins sinuate, the lateral angles produced and more or less acuminate, the posterior angles rounded, posterior margin straight; scutellum as broad as the abdomen, rounded at the apex; prosternum rounded anteriorly and covering the base of the antennæ, sternum slightly sulcated; upper surface of the tibiæ flat.

122. **Hotea curculionoides**, *Herr.-Sch.* (Pachycoris) *Wanz. Ins.* iii, p. 106, f. 331 (1835); *Dall. List Hem.* i, p. 39. 1 (1851); *Stål* (Tylonca), *En. Hem.* iii, p. 25. 4 (1873); *Dist. A. M. N. H.* (7) iv, p. 45 (1899).
Pachycoris punctulatus, *Germ. Zeitschr.* i, p. 105. 48 (1839).
Hotea nasuta, *Walk. Cat. Het.* i, p. 58. 9 (1867).

Ochraceous, thickly, coarsely, and darkly punctate; central lobe to head, lateral margins and three indistinct longitudinal fasciæ to pronotum, a central longitudinal line to scutellum terminating in an apical spot, and a curved anterior discal area paler or levigate; head and lateral pronotal angles beneath piceous; antennæ ochraceous, fourth joint (excluding apex) and the whole of the apical joint piceous.

Length 8 to $9\frac{1}{2}$; breadth between pronotal angles 6 millim.

Hab. North Khási Hills (*Chennell*); Nága Hills (*Doherty*). Ceylon (*vide Dohrn*). Burma; Bhamo, Palon, Karennee (*Fea*).

Fig. 28.—*Hotea curculionoides.*

Tenasserim; Myitta (*Doherty*), Meetan (*Fea*).—Common in the Malay Peninsula, recorded from China, Fow-choo-foo, and generally distributed throughout the Malayan Archipelago.

123. **Hotea nigrorufa**, *Walk. Cat. Het.* i, p. 57. 6 (1867).

Closely allied to the preceding species (*H. curculionoides*), but the ground-colour above is castaneous, not ochraceous, the lateral margins of the pronotum very distinctly ochraceous, the antennæ are more robust (especially the fourth and fifth joints), the connexivum and lateral margins of the abdomen beneath distinctly ochraceous, and the body slightly more robust.

Length 9 to 10; breadth between pronotal angles 6 millim.

Hab. Coonoor, Nilgiris (*Brit. Mus.*).

Genus DEROPLAX.

Deroplax, *Mayr, Verh. z.-b. Ges. Wien*, xiv, p. 905 (1864).
Argocoris, *Mayr, loc. cit.* p. 905.
Sergia, *Stål, Hem. Afr.* i, pp. 35 & 56 (1864).

Type, *D. circumducta*, Germ. An African species.

Distribution. Central and South Africa and Madagascar; one species said to be Indian.

Allied to *Hotea*, from which it can be at once distinguished by the shorter and less acuminate head, the non-angulated lateral angles of the pronotum, the more profoundly sulcated sternum, &c.

124. **Deroplax diffusa**, *Walk.* (Hotea?) *Cat. Het.* i, p. 57. 7 (1867) *Dist. A. M. N. H.* (7) iv, p. 45 (1899).

"Testaceous, elliptical, very minutely punctured. Head slightly rostriform, with two black longitudinal lines, which in the fore part are accompanied by two slight furrows. Thorax somewhat

rounded along the hind border, angular on each side, contracted in front; two slight and interrupted black lines; a transverse lanceolate ferruginous-bordered mark on each side near the fore border. Scutellum with a short longitudinal streak on each side, composed of minute black speckles." (*Walker.*)

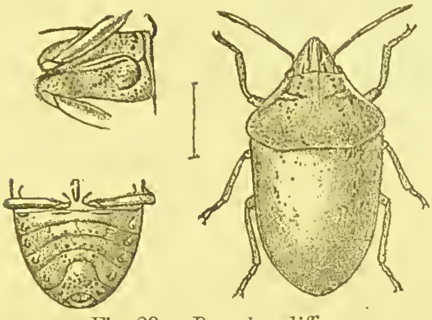

Fig. 29.—*Deroplax diffusa.*

Length 9 millim.

Hab. "Hindostan" (*Brit. Mus.*).

No more precise locality for the unique type has been obtained.

Division *ODONTOTARSARIA.*

Odontotarsaria, *Stål, En. Hem.* iii, p. 4 (1873).

Head as long as broad or longer; anterior lateral margins of the pronotum not or very slightly rounded; orifices not distinguishable; second joint of antennæ straight.

Genus **ALPHOCORIS.**

Alphocoris, *Germ. Zeitschr.* i, p. 58 (1839); *Dall. List Hem.* i, p. 5 (1851); *Stål, Hem. Afr.* i. pp. 35 & 60 (1864).

Type, *A. lixoides*, Germ.
Distribution. Throughout Africa; North India.
Generic characters as diagnosed above (*Odontotarsaria*) and as shown in figure below.

125. **Alphocoris lixoides**, *Germ. Zeitschr.* i, p. 59. 1, t. 1. f. 3 (1839).

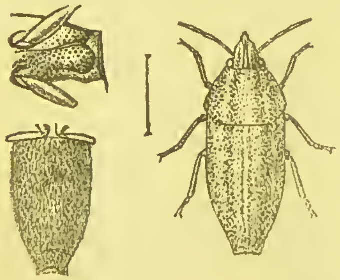

Fig. 30.—*Alphocoris lixoides.*

Ochraceous; lateral areas and apex of head, four longitudinal fasciæ, two on each lateral area, crossing pronotum and scutellum, and two central lines to scutellum piceous: body beneath and legs piceous, thickly greyishly tomentose, lateral margins of sternum and abdomen more or less ochraceous; antennæ, rostrum, and tarsi ochraceous.

Length 8 to $8\frac{1}{2}$; breadth between pronotal angles $2\frac{1}{2}$ millim.

Hab. North India (*Boys*). Bombay; Khandála (*Dixon*).

Division *EURYGASTRARIA.*

Eurygastraria, *Stål, En. Hem.* iii, p. 4 (1873).

Differing from the previous division (*Odontotarsaria*) by having the orifices distinct and the second joint of the antennæ somewhat curved.

A. Scutellum much narrower than abdomen .. EURYGASTER, p. 68.
B. Scutellum almost or practically covering the abdomen .... MELANODEMA, p. 69.

Genus EURYGASTER.

Eurygaster, subg. Eurygaster, *Lap. Ess.* p. 69 (1832).
Bellocoris, pt., *Hahn, Wanz. Ins.* ii, p. 42 (1834).
Eurygaster, *Spin. Ess.* p. 365 (1837).
Tetyra, *Germ. Zeitschr.* i, p. 72 (1839).
Eurygaster, subg. Platypleurus, *Muls. & Rey, Pun. France*, p. 59 (1865).

Type, *E. hottentotus*, Fabr. A Palæarctic species.
Distribution. Neotropical and Palæarctic Regions, just entering the North-west Oriental Region.

Body oval or ovate, moderately convex. Head flat, deflected, slightly concave; antennæ short and slender. Pronotum sexangular; scutellum much narrower than the abdomen, the lateral margins of the corium, especially at base, being exposed. Abdomen with the connexivum flattened, extending beyond the latitude of the pronotum; tibiæ sulcated above.

126. **Eurygaster maura**, *Linn.* (Cimex) *Faun. Suec.* p. 246. 913 (1761); *Stål* (Platypleurus), *En. Hem.* iii, p. 30. 4 (1873); *Leth. & Sev. Cat. Gén. Hém.* i, p. 45 (1893) et synon.; *Atk. J. A. S. B.* lvi, p. 187. 105 (1887).
Thyreocoris austriacus, *Schrank, Faun. Boica*, ii, p. 68. 1095 (1801).
Tetyra picta, *Fabr. Syst. Rhyng.* p. 136. 38 (1803).
Eurygaster cognatus & orientalis, *Westw. in Hope Cat.* i, p. 11 (1837).

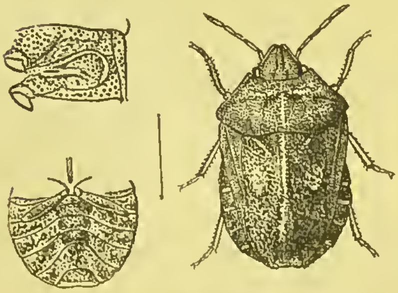

Fig. 31.—*Eurygaster maura.*

Ochraceous, more or less suffused with dark or purple-brown and thickly and darkly punctate; connexivum with large quadrate dark spots formed by dark punctures.

This species varies in colour from almost uniform ochraceous to luteous with fasciæ and suffusions of various shades of brown, in some varieties nearly almost suffused with dark brown. Scopoli (' Ent. Carn.' p. 120) states that

in all the varieties the colour of the under surface is always the same, but this cannot be maintained.

Length 9 to 10; breadth between pronotal angles 6 millim.

Hab. India (*Westwood*).—*E. maura* occurs generally throughout the Palæarctic Region, and is included here on the specimens described by Westwood now in the Hope Collection at Oxford.

According to Leon Dufour this species is common in France upon the ears of wheat, which it pierces and sucks while they are in a green state.

Genus **MELANODEMA**.

Melanodema, *Jakowl. Troudy Ent. Ross.* xi, p. 205 (1880); *Oschan. Zoogeogr. Char. Faun. Polusch. Turkest.* pp. 28, 65 (1891).

Type, *M. carbonaria*, Jakowl., from Turkestan.

Distribution. Turkestan and North-western India.

Body oblong, convex above, broadest near apex of abdomen. Head large, convex, deflected; antennæ five-jointed, second and third joints smaller than fourth and fifth. Pronotum sexangular, widest between the lateral angles, which are rounded, transversely impressed near centre and with a central longitudinal carination. Scutellum large, almost completely covering the abdomen, the corium exposed at base. Rostrum reaching the posterior coxæ.

127. **Melanodema apicifera,** *Dist. A. M. N. H.* (7) iv, p. 46 (1899).

Black, coarsely punctate; an irregular elongate apical spot to scutellum ochraceous; legs and antennæ (in type) mutilated; pronotum and scutellum with a distinct central, longitudinal, carinate line. Allied to *M. carbonaria*, Jakowl., but broader; apical spot to scutellum much larger; pronotum less foveate; scutellum much less foveate at basal margin; central carina to pronotum and scutellum distinct.

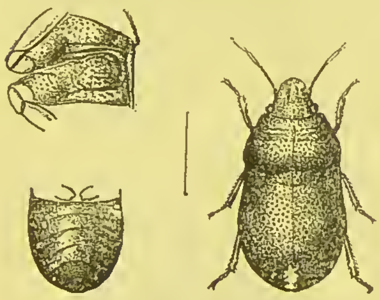

Fig. 32.—*Melanodema apicifera.*

Length 9 millim.

Hab. Bombay (*Leith, Coll. Dist.*).

The specimen on which this species is founded was contained in the collection of Dr. Leith, which I acquired more than twenty years ago. These specimens were all described as from Bombay, but Mr. Blanford informs me that Dr. Leith collected also in Sind—a fact to be remembered in connection with the habitat of this species.

Division *ODONTOSCELARIA*.

Odontoscelaria, *Stål, En. Hem.* iii, p. 4 (1873).

Body setose or pilose; head transverse, sub-semiorbicular; pronotum anteriorly broader than the head, anterior lateral margins distinctly rounded; scutellum very broad.

Genus **ARCTOCORIS**.

Arctocoris, part., *Germ. Zeitschr.* i, p. 46 (1839); *Stål, En. Hem.* iii, p. 31 (1873).
Irochrotus, *Amy. & Serv. Hém.* p. 39 (1843).

Type, *A. tomentosus*, Germ. An eastern Palæarctic species.
Distribution. Palæarctic Region and North-western India.

Body thickly clothed with long hairs; lateral margins of the pronotum deeply sinuated near middle, and profoundly transversely impressed across disk.

128. **Arctocoris incisus**, *Stål, En. Hem.* iii, p. 31 (1873).

Piceous, very thickly greyishly pilose; scutellum with two dark elongate marks on each side, one at base and the other about middle; antennæ brownish-ochraceous; pronotum with a deep transverse incision, beyond which the pilosity is very profuse; body beneath and legs piceous, much less pilose than above; tarsi brownish-ochraceous.

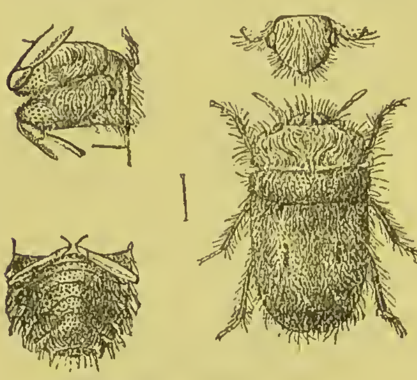

Fig. 33.—*Arctocoris incisus.*

Length $5\frac{1}{2}$; breadth between pronotal angles $3\frac{1}{2}$ mm.

Hab. "Bengal" (*Stockh. Mus.*), probably N.W. India or Himalayas.

The figure is taken from the type, kindly forwarded for that purpose by Dr. Chr. Aurivillius.

Subfamily III. GRAPHOSOMATINÆ.

Pentatomina, *Stål* (pt.), *En. Hem.* v, p. 28 (1876).
Graphosomidæ, *Leth. & Sev. Cat. Gén. Hém.* i, p. 49 (1893).

This subfamily corresponds to the group of genera separated by Stål (*supra*), characterized by the large and long scutellum, which frequently reaches the apex of the abdomen, only the basal and outer margins of the corium being exposed.

Synopsis of Genera.

A. Body convex, more or less gibbous.
  a. Pronotum and scutellum tuberculate .... BRACHYCEROCORIS, [p. 71.
  b. Pronotum and scutellum not tuberculate .. EOBANUS, p. 72.
B. Body neither gibbous nor prominently convex.
  a. Lateral lobes of head not meeting in front of central lobe.
    a. Lateral lobes of head not narrowed anteriorly.
      a′. Lateral lobes of head dilated, divergent. STORTHECORIS, p. 77.
      b′. Lateral lobes of head not dilated .... PODOPS, p. 72.
    b. Lateral lobes of head narrowed anteriorly .... AMAUROPEPLA, p. 78.
  b. Lateral lobes of head meeting in front of central lobe.
    a. Head plain, lateral lobes not tumescent.. MELANOPHARA, p. 79.
    b. Lateral lobes of head tumescent .... ASPIDESTROPHUS, [p. 80.

Genus BRACHYCEROCORIS.

Brachycerocoris, *Costa, Rend. Ac. Napl.* (2) viii, p. 191 (1863); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 502.
Teucrus, *Stål, Ann. Soc. Ent. Fr.* 1865, p. 168.
Teressa, *Walk. Cat. Het.* i, p. 113 (1867).

Type, *B. camelus*, Costa.

Distribution. Ceylon, Malay Archipelago, China, and South Africa.

Body robust, rugged, tuberculated and convex above. Head large, deflected, the lateral lobes a little longer than the central lobe and anteriorly contiguous. Pronotum strongly and somewhat perpendicularly deflected in front, convex, the lateral angles moderately prominent. Scutellum large, strongly tuberculated. Membrane with longitudinal veins. Sternum sulcated.

129. **Brachycerocoris camelus**, *Costa, Rend. Ac. Napl.* (2) viii, p. 192 (1863).
Teressa terranea, *Walk. Cat. Het.* i, p. 113 (1867).

Dark chocolate-brown; head and anterior half of pronotum ochraceously tomentose; antennæ and tarsi brownish-ochraceous. Head and anterior half of pronotum tomentose, the last excavate and with a prominent tubercle at its base, posterior half with three central longitudinal ridges and very coarsely punctate, the lateral angles shortly spinous; scutellum with a large compressed conical tubercle at base, its margins serrate and with a much smaller obtuse tubercle near apex.

Fig. 34.
Brachycerocoris camelus.

Length 7; breadth between pronotal angles 5 millim.

Hab. Ceylon (*Lewis*).—China (*Brit. Mus.*).

Genus EOBANUS.

Eobanus, *Dist. A. M. N. H.* (7) viii, p. 240 (1901).

Type, *E. typicus*, Dist.
Distribution. At present only known from Burma.

Allied to *Bolbocoris*, Amy. & Serv. Body convex, short, moderately gibbous above. Head with the lateral lobes a little longer than and meeting in front of the central lobe, their margins reflexed. Antennæ five-jointed; second joint short and slender, fourth and fifth, and apex of the third, incrassated. Pronotum with the lateral margins convex, very strongly transversely impressed on disk. Scutellum almost as long as abdomen, deeply sinuate at base, where the corium is considerably exposed; two oblique transverse impressions near base, slightly longitudinally continued at their apices. Rostrum about reaching the intermediate coxæ; meso- and metasterna with two very distinctly raised central carinæ.

130. **Eobanus typicus**, *Dist. A. M. N. H.* (7) viii, p. 241 (1901).

Black, very coarsely punctate; abdomen beneath much more

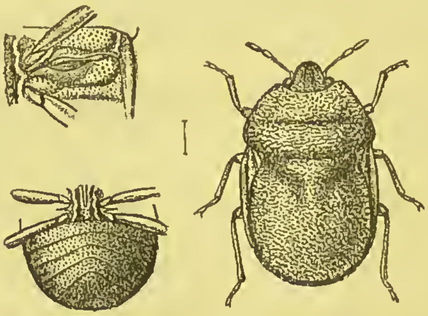

Fig. 35.—*Eobanus typicus.*

finely punctate; antennæ and tarsi pale brownish; antennæ with the third joint a little longest, fourth and fifth subequal.

Length $3\frac{1}{2}$; breadth between pronotal angles 2 millim.

Hab. Burma; Bhamo (*Coll. Dist.*).

Genus PODOPS.

Podops, *Lap. Ess. Hém.* p. 72 (1832); *Dall. List Hem.* i, p. 52 (1851).
Scotinophara, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 502; *id. En. Hem.* v, p. 29 (1876); *Horv. Wien. ent. Zeit.* 1883, p. 165.
Amaurochrous, *Stål, En. Hem.* ii, p. 15 (1872).
Petalodera, *Horv. Wien. ent. Zeit.* 1883, p. 138.
Opocrates, *Horv. loc. cit.* p. 161.

Type, *P. inuncta*, Fabr. A European species.
Distribution. Palæarctic, Neotropical, and Oriental Regions, extending throughout the Malayan Archipelago to Australia.

Body more or less ovate. Head slightly convex, more or less sinuate before the eyes; lateral lobes not meeting in front of the central lobe; antenniferous tubercles placed below the lateral margins of the head, prominent and acutely produced outwards; antennæ somewhat short, basal joint entirely invisible from above, second joint distinctly shorter than the third; rostrum reaching the posterior coxæ. Pronotum transverse, with an acute tooth at or near anterior lateral angles, the lateral margins either nearly straight or more or less convex, plain or serrated, lateral angles prominent or subprominent. Scutellum about reaching the apex of the abdomen, slightly narrowed behind the base; sternum furrowed.

I. Lateral margins of pronotum spined below the anterior angles.

131. **Podops coarctata**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 530. 44-5 (1798); *Stål* (Scotinophara), *Hem. Fabr.* i, p. 21. 2 (1868).
Tetyra bispinosa (pt.), *Fabr. Syst. Rhyng.* p. 138. 48 (1803).
Podops spinosus, nasalis, & exacta, *Walk. Cat. Het.* i, pp. 73, 74, nos. 18, 19, 24 (1867).

Brownish-ochraceous, very coarsely and darkly punctate; antennæ (excluding basal joint), tibiæ, tarsi, rostrum, and three small obscure spots at base of scutellum ochraceous or brownish-

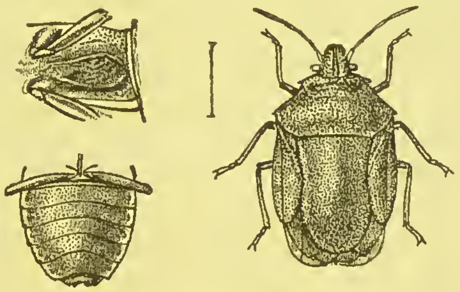

Fig. 36.—*Podops coarctata.*

ochraceous: body beneath piceous, in some specimens the lateral margins of the abdomen distinctly paler. Lateral margins of the pronotum distinctly spined a little before anterior angles, lateral angles shortly spinous.

Length 7 to 9; breadth between pronotal angles 4 to 5 millim.

Hab. Tranquebar. Ceylon. Burma; Rangoon, Bhamo, Teinzo (*Fea*).—Also a common species in the Malay Peninsula and received from Java.

II. Lateral margins of pronotum spined at or near the anterior angles.

A. *Anterior pronotal spine more or less horizontally extended.*

a. *Lateral margins of pronotum almost straight.*

132. **Podops lurida**, *Burm.* (Tetyra) *Nov. Act. Ac. Leop.* xvi, *Suppl.* i. p. 288. 7 (1834); *Germ. Zeitschr.* i, p. 64. 3 (1839); *Stål* (Scotinophara), *En. Hem.* v, p. 33. 4 (1876); *Dist.* (Scotinophora) *A. M. N. H.* (5) iii, p. 44 (1879).

Fuscous or piceous; tibiæ (excluding base) and tarsi generally more or less castaneous. Pronotum with the lateral margins nearly straight, a prominent spine at or near each anterior angle, the lateral angles subprominent or notched, a distinct transverse impression across anterior disk; the whole upper surface coarsely punctate.

Length 10 to 10½; breadth between pronotal angles 5½ millim.

Hab. Assam (*Chennell*).—A very rare species in India, but common in China and Japan.

133. **Podops obscura**, *Dall. List Hem.* i, p. 52. 4 (1851); *Stål* (Scotinophara), *En. Hem.* v, p. 34 (1876).

Closely allied to the preceding species (*P. lurida*, Burm.), but smaller, generally paler in hue, the transverse impression to the pronotum less profound.

Length 9 to 9½; breadth between pronotal angles 5 millim.

Hab. Assam; Nága Hills (*Chennell*); Tenasserim (*Brit. Mus.*).—The species has also been received from North China. The figure given by Vollenhoven (Faun. Ind. Néerl. i, p. 41, pl. iii, f. 6) as representing specimens from Java and Borneo is not typical.

b. *Lateral margins of pronotum more or less convex.*

134. **Podops affinis**, *Hagl.* (Scotinophara) *Stett. ent. Zeit.* xxix, p. 153. 2 (1868).

Above greyish-black, coarsely punctate, lateral margins of the corium narrowly brownish; beneath with legs piceous, tibiæ (excluding base), tarsi, and rostrum brownish-ochraceous. Pronotum with a minute tooth at each anterior angle, the lateral angles minutely produced, the lateral margins convexly sinuate, and a distinct transverse impression with rugose margins on anterior area.

Length 9; breadth between pronotal angles 5 millim.

Hab. Burma; Karennee (*Fea*); Rangoon (*Coll. Dist.*).

135. **Podops ceylonica**, *Dist. A. M. N. H.* (7) viii, p. 241 (1901).

Ochraceous, coarsely and darkly punctate; head, anterior area of pronotum, and a small foveate spot at each basal angle of the scutellum more or less piceous; scutellum with three small ochraceous spots at base and with two irregular longitudinal series of very dark punctures: body beneath piceous, lateral margins of metasternum and abdomen broadly ochraceous; rostrum and antennæ brownish-ochraceous, the last with the apical joint piceous; legs castaneous, tibiæ (excluding bases and also the apices of the anterior tibiæ) and the tarsi ochraceous.

Allied to *P. limosa*, Walk., in colour, but to *P. affinis*, Hagl., in structure of the pronotum.

Length 7; breadth between pronotal angles 4 millim.

Hab. Ceylon; Pomparipo.

c. *Lateral margins of pronotum serrate or dentate.*

136. **Podops serrata**, *Voll. Faun. Ind. Néerl.* i, p. 42, pl. 3, f. 9 (1863).

Brownish-ochraceous, thickly, coarsely, and darkly punctate; head and anterior area of pronotum ochraceously pubescent; scutellum with three small ochraceous spots at base: body beneath piceous; legs piceous, femora castaneous at base, tibiæ and tarsi brownish-ochraceous; rostrum and antennæ brownish-ochraceous, the first with its apex fuscous. Lateral lobes of the head distinctly longer than the central and widely cleft at their apices; pronotum with a long, laterally-directed spine at the anterior angles, the lateral angles obtusely spinous, the lateral margins serrate, and with a distinct transverse impression, in front of which the surface is moderately tuberculous; scutellum a little gibbous at base and with a distinct central longitudinal impression.

Length 9 to 11; breadth between pronotal angles 6 to 7 millim.

Hab. Sikhim; Mungphu. Nága Hills. Burma; Bhamo (*Coll. Dist.*).—Also recorded from Malay Peninsula, Borneo, and Philippines.

137. **Podops dentata** *Dist. A. M. N. H.* (7) viii, p. 242 (1901).

Pale brownish-ochraceous; head and pronotum thickly and coarsely punctate, scutellum with the punctures arranged in fine longitudinal series, exposed corium also somewhat longitudinally punctate: body beneath and legs concolorous, femora with a pale annulation near apices; apical joint of antennæ and disks of sternum and abdomen more or less piceous. Rostrum with the lateral margins finely dentate, the anterior lateral angles produced in short laterally-produced spines, lateral angles obtusely spinous; transversely impressed on anterior disk and behind anterior margin.

Length 7; breadth between pronotal angles 4 millim.

Hab. Calcutta (*Coll. Dist.*); Maldah (*Atkinson Coll.*, *Brit. Mus.*).

B. *Anterior pronotal spines forwardly extended.*

a. *Lateral margins of pronotum almost straight.*

138. **Podops limosa**, *Walk. Cat. Het.* i, p. 72. 17 (1867); *Dist. A. M. N. H.* (7) iv, p. 48 (1899).

Dull ochraceous, thickly, coarsely, and more darkly punctate; head, anterior area and apices of spines at lateral angles of pronotum, and a small foveate spot at basal angles of scutellum more or less piceous; punctures to the scutellum with indications of some longitudinal series: body beneath piceous, lateral margins of metasternum and abdomen broadly ochraceous; legs, rostrum, and antennæ brownish-ochraceous, the femora castaneous or piceous. Anterior angles of pronotum with a long forwardly-directed spine; lateral margins nearly straight, lateral angles with a short obtuse spine.

Length 7; breadth between pronotal angles 4 millim.

Hab. Calcutta (*Atkinson Coll., Brit. Mus.*); Tenasserim.

139. **Podops ochracea**, *Dist. A. M. N. H.* (7) viii, p. 241 (1901).

Ochraceous, coarsely and more darkly punctate; head, anterior area and apices of lateral angles to pronotum, and a small foveate spot in each basal angle of the scutellum more or less piceous: body beneath, legs, antennæ, and rostrum ochraceous; disk of abdomen, apical joint of antennæ, coxæ, and bases of femora piceous.

Allied to the preceding species (*P. limosa*), but differing by the larger size, different colour of the body beneath and femora, &c.

Length 8; breadth between pronotal angles $4\frac{3}{4}$ millim.

Hab. Arakan (*Coll. Dist.*). Tenasserim; Victoria Point (*Atkinson Coll.*).

b. *Lateral margins of pronotum more or less convex.*

140. **Podops nigra**, *Dall. List Hem.* i, p. 53 (1851).

Black; outer margins of the corium and lateral margins of the abdomen beneath obscure pitchy red; tarsi ochraceous; rostrum castaneous, with the basal joint black. Head long, with a strong spine before each eye; pronotum with a long anteriorly-directed spine at each anterior angle, the lateral margins reflexed and concavely sinuate, the lateral angles obtusely spinous, slightly gibbous in front, with a distinct transverse impression near the middle.

Allied in general appearance and shape to *P. affinis*, Hagl., but differing by the more elongate head and the length and direction of the spines at the anterior angles of pronotum.

Length 8; breadth between pronotal angles 4 millim.

Hab. "India" (*Brit. Mus.*).

141. **Podops scutellata**, *Scott, Trans. Ent. Soc.* 1880, p. 307.

Brownish-ochraceous, coarsely and more darkly punctate; head, anterior area and lateral spines of pronotum, broad central area to scutellum, extending more than half its length and widest at base, where there is a foveate spot in each basal angle, black; two small ochraceous spots on anterior area of pronotum, one at each inner angle of the transverse callosities; three small ochraceous spots at base of scutellum: body beneath and legs piceous; lateral abdominal margins, the tarsi and antennæ brownish-ochraceous. Pronotum with a distinct transverse impression, the spines at anterior angles very slightly directed forward, the lateral margins bi-concavely sinuate, the lateral angles produced into obtuse spines.

Length 6; breadth between pronotal angles 4 millim.

Hab. Ceylon (*Lewis*).—Also originally received from Japan.

c. *Lateral pronotal angles longly spinous.*

142. **Podops bispinosa**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 529. 31–2 (1798); *id.* (Tetyra) *Syst. Rhyng.* p. 138. 48 (1803) (pt.); *Stål* (Scotinophara), *Hem. Fabr.* i, p. 21. 1 (1868).

Brownish-ochraceous, coarsely and darkly punctate; head, anterior area and spines to pronotum, a foveate spot in each basal angle of the scutellum, piceous: body beneath and legs piceous; rostrum, tibiæ, tarsi, some lateral sternal spots and lateral abdominal margins, brownish-ochraceous; antennæ brownish-ochraceous, the apical joint fuscous. Pronotum with a strong forwardly-directed spine at each anterior angle, and with a long slender spine at each lateral angle; the apices of the spines brownish; pronotum with a distinct pale central carinate line and with three small indistinct pale spots at base of scutellum.

Length 7 to 8; breadth between pronotal angles 5 millim.

Hab. Tranquebar (*Mus. Lund.*); Bombay, Deccan (*Day*).

Genus STORTHECORIS.

Storthecoris, *Horv. Wien. ent. Zeit.* ii, p. 296 (1883).

Type, *S. nigriceps*, Horv.

Distribution. North-east India, Malay Peninsula, Borneo.

Body short, ovate. Head transverse, slightly convex, gradually dilated forwards before the anteocular sinus; lateral lobes flattened, longer than the central lobe, their apices somewhat widely separated; antenniferous tubercles produced outwardly in a conical spine; antennæ somewhat short, basal joint altogether visible from above. Pronotum transverse, lateral margins irregularly serrate, provided with a long spine near each anterior angle, toothed at lateral angles, disk centrally impressed. Scutellum

large, reaching or nearly reaching the apex of the abdomen; prosternum furrowed.

The flattened, dilated, divergent, lateral lobes of the head will serve to distinguish this genus from the others to which it is allied.

143. **Storthecoris nigriceps**, *Horv. Wein. ent. Zeit.* ii, p. 297 (1883).
Scotinophara tarsalis, *Voll.* (var.), *Dist. A. M. N. H.* (5) iii, p. 46 (1879); *Atk. J. A. S. B.* lvi, p. 195 (1887).

Brownish-ochraceous, thickly and darkly punctate, head more or less piceous; body beneath piceous; antennæ, rostrum, legs, and lateral areas of metasternum and abdomen brownish-ochraceous. Body thickly and coarsely punctate; scutellum more or less

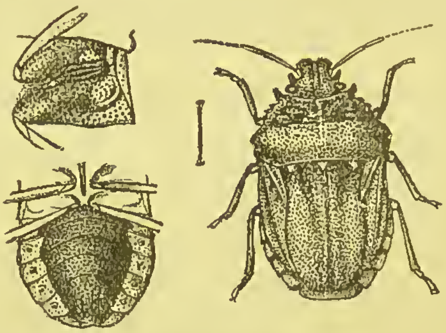

Fig. 37.—*Storthecoris nigriceps.*

piceous at base, with three small ochraceous spots on basal margin, and three longitudinal, discal, indistinct punctate fasciæ; lateral margins of the pronotum irregularly and dentately serrate, between the anterior and lateral spines containing two concavities.

Length 7; breadth between pronotal angles 4 millim.

Hab. Khási Hills (*Chennell*); Sibságar (*Coll. Dist.*).

This species is closely allied to the *Podops tarsalis*, Voll. (Faun. Ind. Néerl. p. 42, t. 3, f. 8, 1863), as a variety of which in 1879 (*supra*) I enumerated some Assamese specimens. Dr. Horvath has since described this form and made a genus for its reception, a course followed here. *P. tarsalis*, Voll., must be included in *Storthecoris*.

Genus AMAUROPEPLA.

Amauropepla, *Stål, Öfr. Vet.-Ak. Förh.* 1867, p. 502; *id. En. Hem.* v, p. 29 (1876).

Type, *A. denticulata*, Hagl.

Distribution. N.E. India, Burma.

Differs from the two preceding genera (*Podops* and *Storthecoris*) in having the head gradually narrowed before the anteocular sinus; the anterior lateral margins of the pronotum are rounded and denticulate; head somewhat flat, median lobe not elevated.

144. **Amauropepla denticulata,** *Hagl. Stett. ent. Zeit.* xxix, p. 151 (1868).

Brownish-ochraceous, thickly and darkly punctate; head, anterior area of pronotum, base, a central longitudinal line, and basal angles to scutellum piceous, between the basal patch and basal angles a small luteous spot; antennæ brownish-ochraceous: body beneath piceous; legs, rostrum, lateral margins of meso- and metasterna, and abdomen ochraceous. Lateral lobes of the head a little longer than the central lobe, but widely divergent at their apices; antenniferous tubercles spinous; rostrum short, not reaching the intermediate coxæ.

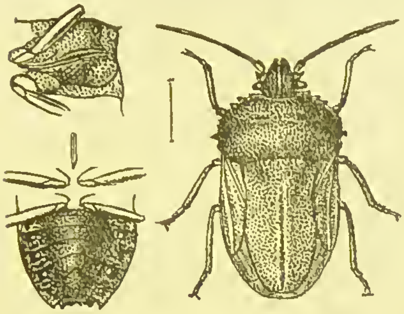

Fig. 38.—*Amauropepla denticulata.*

Length 8 to 9; breadth between pronotal angles 5 millim.

Hab. Assam (*Coll. Dist.*). Rangoon (*Stockh. Mus.*).

Genus MELANOPHARA.

Melanophara, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 503; *id. En. Hem.* v, p. 29 (1876).

Type, *M. dentata,* Hagl.

Distribution. N.E. India, Burma.

This genus may be distinguished from the preceding (*Amauropepla*) by having the lateral lobes of the head longer than the central lobe, with their apices contiguous; the spine at the antenniferous tubercles is also longer, the eyes are distinctly stylated, and the lateral margins of the head are acute.

145. **Melanophara dentata,** *Hagl. Stett. ent. Zeit.* xxix, p. 152. 1 (1868).

Black, opaque, somewhat thickly punctate; rostrum and tarsi brownish: body beneath greyish pubescent; pronotum anteriorly elevated and rugosely waved, anterior angles with a minute tooth, lateral margins convexly sinuate and furnished with about four small teeth, lateral angles acutely spined; first and second joints of the antennæ equal to and about one-half the length of the third; rostrum reaching the intermediate coxæ.

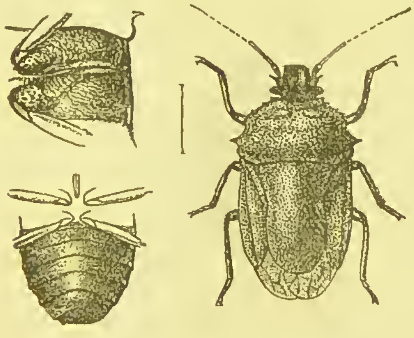

Fig. 39.—*Melanophara dentata.*

Length $8\frac{1}{2}$; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Nága Hills (*Chennell*). Rangoon (*Stockh. Mus.*).

146. **Melanophara spinifera**, *Westw.* (Podops) *in Hope Cat. Hem.* i, p. 16 (1837).
Podops funestus, *Walk. Cat. Het.* iii, p. 521 (1868).

Allied to *M. dentata*, Hagl., but larger, the anterior area of the pronotum much more strongly tuberculate, the lateral margins more strongly spined, punctures on body above coarser and more profound.

Length 9 to 11 millim.

Hab. Bengal (*Hope Coll.*); Calcutta (*Atk. Coll.*).—Penang.

Genus ASPIDESTROPHUS.

Aspidestrophus, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 232; *id. Freg. Eug. Resa, Ins. Hem.* p. 219 (1859); *id. En. Hem.* v, p. 29 (1876).

Type, *A. morio*, Stål.

Distribution. N.E. India, Burma, Malay Peninsula; Malayan Archipelago.

Differs from *Melanophara* in having the head more convex and its lateral margins obtuse, the lateral lobes tumescent; scutellum moderately gibbous at base.

147. **Aspidestrophus morio**, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 232. 1; *id. Freg. Eug. Resa, Ins. Hem.* p. 219, pl. 3, f. 1 (1859); *Voll. Faun. Ind. Néerl.* i, p. 43. 1 (1863).

Dark fuscous; a linear spot on pronotum, rostrum and tarsi ochraceous. Pronotum with the lateral margins almost oblique, very strongly and coarsely dentate, the lateral angles distinctly spinous, a distinct transverse impression behind the middle, in front of which the disk is moderately, transversely, narrowly gibbous.

Length 9; breadth between pronotal angles $5\frac{1}{2}$ millim.

Hab. Nága Hills (*Chennell*). Java (*Stockh. Mus.*).

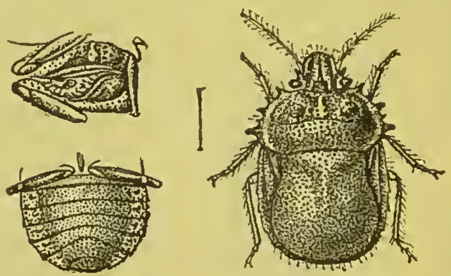

Fig. 40.—*Aspidestrophus lineola.*

148. **Aspidestrophus lineola**, *Voll. Faun. Ind. Néerl.* i, p. 44. 2, pl. 3, f. 10 (1863).

Closely allied to the preceding species (*A. morio*, Stål), but

differing by its smaller size, convex lateral margins of the pronotum, shorter and relatively broader scutellum, transverse impression to pronotum almost reaching lateral margins, &c.

Length 8; breadth between pronotal angles 5 millim.

Hab. Nága Hills (*Chennell*). Burma; Karennee (*Fea*). Malay Peninsula; Perak. S.E. Borneo.

Subfamily IV. CYDNINÆ.

Cydnini, *Schiödte, in Kröy. Nat. Tidsskr.* (2) ii, p. 454 (1849).
Cydnidæ, *Dall. List Hem.* i, p. 109 (1851).
Cydnida, *Stål, Hem. Afr.* i, p. 18 (1864).
Cydnina, *Stål, En. Hem.* v, p. 17 (1876).
Cydnides, *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 25 (1881).

Antennæ remote from the lateral margins of the head, inserted near the base of the head, or not more remote therefrom than the anterior margin of the eyes. Costal margin of corium prominent beyond the lateral margin of the abdomen. First abdominal segment, or at least its side, covered by the metasternum, the extreme posterior margin only visible. Lateral abdominal margins entire, not incised between the segments, the segmental angles not prominent. Tibiæ spinose.

The Cydninæ are universally distributed, and none as yet appear to have been recorded as injurious insects. Some are found under stones and similar objects, and many are procured by sweeping low herbage.

Eighteen genera are here enumerated, but it is more than probable that many forms of these obscure insects await discovery.

Synopsis of Genera.

I. Scutellum moderately long, the lateral margins longer than the basal.
  A. Eyes obsolete, scarcely visible . . . . CEPHALOCTEUS, p. 82.
  B. Eyes entire, ordinary, sometimes prominent. Ocelli visible.
    a. Anterior tarsi inserted before the apex of the tibiæ.
      a. Posterior tibiæ thickened . . . . STIBAROPUS, p. 84.
      b. Posterior tibiæ slender . . . . LACTISTES, p. 86.
    b. Anterior tarsi inserted at the apex of the tibiæ.
      a. Posterior tibiæ somewhat flattened and margined with short close stiff hairs . . . . SCOPARIPES, p. 88.
      b. Posterior tibiæ cylindrical.
        a'. Antennæ four-jointed . . . . ADRISA, p. 89.
        b'. Antennæ five-jointed.
          a^2. Margins of the head spinulose, setose, or ciliated. . . . . CYDNUS, p. 90.
          b^2. Margins of the head ciliated, not spinulose.

a^3. Rostrum long, reaching or passing the 3rd abdominal segment	GAMPSOTES, p. 94.
b^3. Rostrum not passing the posterior coxæ.	
a^4. Corium not broader than abdomen.	
a^5. Posterior femora generally spined	MACROSCYTUS, p. 94.
b^5. Posterior femora not spined	GEOTOMUS, p. 98.
b^4. Corium broader than abdomen	FROMUNDUS, p. 99.
II. Scutellum short, triangular, margins about equal in length.	
A. Head neither spinose nor dentate.	
a. Head with the lateral lobes longer than central and strongly reflexed	BRACHYPELTA, p. 100.
b. Head with the lateral lobes not distinctly longer than the central.	
a. Membrane longer than the corium.	
a'. Apical margin of corium very strongly sinuate	HEURNIUS, p. 101.
b'. Apical margin of corium slightly sinuate	GARSAURIA, p. 102.
b. Membrane shorter than the corium.	CYDNOPELTUS, p. 103.
B. Head marginally hairy or spinous.	
a. Scutellum triangular, apex more or less acute.	
a. Anterior margin of pronotum very slightly concave	CHILOCORIS, p. 104.
b. Anterior margin of pronotum deeply excavated to receive head	PELTOXYS, p. 106.
b. Scutellum with the apex broadly rounded	NISHADANA, p. 107.
III. Prosternum strongly furrowed	SEHIRUS, p. 108.

Genus CEPHALOCTEUS.

Cephalocteus, *Dufour, Ann. Soc. Ent. Fr.* 1834, p. 342; *Sign. Ann. Soc. Ent. Fr.* 1881, p. 38; *Atk. J. A. S. B.* lvi, p. 37 (1887).

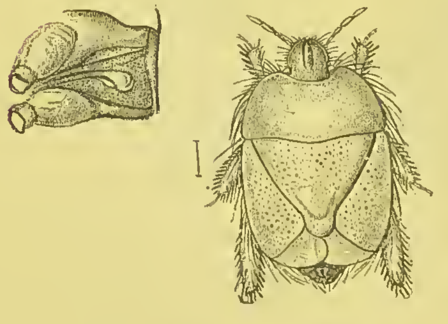

Fig. 41.—*Cephalocteus scarabæoides.*

Type, *C. scarabæoides*, Fabr.

Distribution. Palæarctic, Ethiopian, and Oriental Regions.

The only Indian species of *Cephalocteus* is unknown to me as to other writers: I therefore give a figure of a Palæarctic species to illustrate the genus.

According to Signoret, this genus can be distin-

guished from any other of the Cydninæ by having the eyes almost invisible, composed only of a small tubercle surmounted by one or two others, while the ocelli are absent.

Head longer than broad, spinulose, ciliated on the margin and on the vertex; lateral lobes longer than the central, which is, however, free in front; antennæ five-jointed, first joint longest, the last two shortest and globose. Rostrum reaching the intermediatæ coxæ, second joint stoutest and longest. Pronotum twice as broad as long, pilose on the sides and on part of the disk. Scutellum longer than broad, acuminate. Hemelytra shorter than the abdomen, membrane very short and veinless; femora moderately dilated; intermediate and posterior tibiæ ciliated over their whole surface, the first pair with ten spines on the outer side, apparently mobile, increasing in length and breadth from base to apex, the internal side furnished with four spines and having long hairs; tarsi long and slender; claws with bristle-like appendages. Odoriferous aperture more or less confused in the mesosternal groove with the ostiole towards the middle, and forming an oblique opening with a distinct margin at the base and almost none at apex.

149. **Cephalocteus melolonthoides**, *Schiödte, in Kröy. Nat. Tidsskr.* iv, p. 333 (1843); *Atk. J. A. S. B.* lvi, p. 37 (1887).

I have not seen this species, and can therefore only rely on the description of Schiödte.

Fuscous or piceous, with ferruginous hairs; scutellum and corium at the apex of a paler colour, membrane albescent at the apex; antennæ and rostrum ferruginous; basal margin of head pale yellow; legs rufous, posterior tibiæ piceous, spines fuscous, all the tarsi pale; head almost one-sixth the length of the body, somewhat convex, impressed towards the sides with some unequal punctures; anterior margin of the head between the somewhat exserted eyes broadly rounded, deeply incised at centre; sides of clypeus converging towards the apex, united by a small transverse furrow behind the middle; pronotum at least twice as broad as its median length, not quite twice as long as the head, narrower than the basal breadth by one-third at apex, convex, densely and minutely punctate, somewhat smooth towards the anterior angles; scutellum almost twice as long as the pronotum, somewhat convex, densely punctate, anterior angles very acute, lateral margins straight, apex broadly rounded; corium as broad as half of the anterior margin of the scutellum, densely punctate, somewhat convex, sides convexly sloped, externally rounded; abdomen somewhat smooth, with ferruginous hairs.

Length $3\frac{3}{4}$ millim.

Hab. Travancore.

Genus STIBAROPUS.

Stibaropus, *Dall. List Hem.* i, pp. 111, 125 (1851); *Sign. Ann. Soc. Ent. Fr.* 1881, p. 43.
Pachycnemis, *Jak. Hem. Caucas., Troudy Russk. Ent. Obs.* viii, p. 54 (1875).
Schiodtella, *Sign. Bull. Soc. Ent. Fr.* (6) i, p. clvii (1881), part.

Type, *S. molginus*, Schiödte.
Distribution. Palæarctic and Oriental Regions.

Head inclined anteriorly, longer than broad, the apex slightly emarginate, the margins spinulous; eyes globose, ocelli large; antennæ short, five-jointed, gradually increasing in thickness from base to apex. Rostrum slender, usually reaching the posterior coxæ. Membrane well developed and extending beyond the apex of the abdomen. Anterior tibiæ compressed, with the basal half of the outer margin spinose, the inner margin fringed with hairs, especially at the apex; tarsi inserted at about one-third from apex, long and slender, basal joint very long; intermediate tibiæ somewhat clavate, strongly curved, thickly spinose on the outside, especially towards apex; tarsi inserted at apex of tibiæ, their apical joint longest: posterior legs very stout and somewhat short, femora very broad and somewhat compressed; tibiæ very short, spinose on the outside, much enlarged and abruptly truncated at apex, forming a large oval disk surrounded by closely-set spines; tarsi very short and almost hidden by surrounding spines.

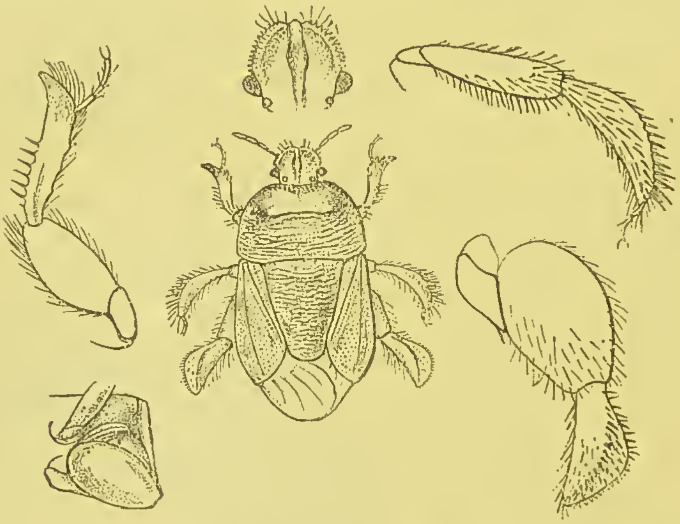

Fig. 42.—*Stibaropus molginus.*

150. **Stibaropus molginus**, *Schiödte* (Scaptocoris), *in Kröy. Nat. Tidsskr.* (2) ii, p. 458 (1849): *Atk. J. A. S. B.* lvi, p. 39 (1887): *Dist. A. M. N. H.* (7) iv, p. 218 (1899).

Stibaropus brunneus, *Dall. List Hem.* i, p. 125, t. iii, f. 1 (1851).
Stibaropus latipes, *Atk.* (*nec Westw.*) *J. A. S. B.* lvi, p. 39 (1887).

Head, pronotum, and scutellum dark castaneous, the corium a little paler in hue; head finely wrinkled, somewhat piceous on basal area, the ocelli red; pronotum strongly transversely wrinkled rather more than half its length, from base to a shallow transverse furrow: in front of this furrow is a transverse line, beyond which the surface is somewhat raised and almost smooth; scutellum transversely wrinkled, with a few scattered punctures; corium thickly and finely punctate; membrane dull ochraceous, semi-hyaline; body beneath pale castaneous, finely pilose.

Length 9; max. breadth $5\frac{1}{2}$ millim.

Hab. "North India" (*Brit. Mus.*). Burma; Sheninaga (*Fea*).

151. **Stibaropus tabulatus,** *Schiödte* (Scaptocoris), *in Kröy. Nat. Tidsskr.* (2) ii, p. 459 (1849); *Stål, En. Hem.* v, p. 17 (1876); *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 45 (1881).

Signoret describes this species (evidently a condensation of the diagnosis of Schiödte) as follows:—"Strongly suboval. Rostrum as long as the sternum. Second joint of the antennæ a fourth part longer than the third *. Scutellum transversely striated, angularly rounded at apex. Corium smooth or very obsoletely punctate.

"Length $7\frac{3}{4}$ millim."

Hab. Travancore.

152. **Stibaropus callidus,** *Schiödte* (Scaptocoris), *in Kröy. Nat. Tidsskr.* (2) ii, p. 460 (1849); *Stål, En. Hem.* v, p. 17 (1876); *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 46 (1881).

Differs from the preceding species by its smaller size; the rostrum only the length of the prosternum; the third joint of the antennæ about equal in length to the fourth; scutellum transversely rugosely punctate, most thickly and more confluent at base; corium finely punctate.

Length 5 to $5\frac{1}{2}$ millim.

Hab. Bengal; Serampore. Calcutta and S. India (*Ind. Mus.*). Burma: Schwego-Myo, Toungoo, Katha, Rangoon, Palon (*Fea*).

"Found flying in the evening on the banks of the Hugli River" (*Atkinson*).

153. **Stibaropus minor,** *Walk. Cat. Het.* i. p. 166. 2 (1867); *Dist. A. M. N. H.* (7) iv, p. 218 (1899).
Stibaropus testaceus, *Walk. loc. cit.* p. 166. 3.
Stibaropus flavidus, *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 47, pl. 2, f. 6 (1881).

This species is more elongate in form and much paler in hue than

* Schiödte evidently, as Signoret suggests, mistook the third for the second joint of the antennæ, and the above should probably be described as "third joint a fourth part longer than the fourth."

those preceding, being generally dark ochraceous; third joint of the antennæ a little longer than the fourth; rostrum about reaching the intermediate coxæ; pronotum profoundly transversely furrowed near centre, behind which the surface is transversely rugulose; scutellum transversely rugosely striate, with a distinct foveate impression near the apex.

Length $5\frac{1}{2}$ to $6\frac{1}{2}$ millim.

Hab. North India (*Coll. Dist.*). Burma; Katha, Bhamo (*Fea*).

Genus LACTISTES.

Lactistes, *Schiödte, in Kröy. Nat. Tidsskr.* (2) ii, p. 456 (1849); *Stål, En. Hem.* v, p. 17 (1876); *Sign. Bull. Soc. Ent. Fr.* (5) ix, p. clxxii (1879); *id. Ann. Soc. Ent. Fr.* (6) i, p. 48 (1881); *Atk. J. A. S. B.* lvi, p. 42 (1887).

Type, *L. vericulatus*, Schiödte. An African species.

Distribution. Ethiopian and Oriental Regions.

As in the preceding genus, the anterior tarsi are apparently inserted before the end of the tibiæ, owing to the prolonged condition of the apex of the tibia—which is more or less emarginate—arising from the union of the apical spines. Head normally ciliated; lateral lobes enclosing the central lobe, but emarginate at apex; vertex more or less rugulose; eyes spinose at base; pronotum narrower in front, with a transverse median impression; corium almost twice as long as the membrane, the last extending beyond the abdomen. In *Stibaropus* the posterior tibiæ are thickened; in *Lactistes* they are slender.

154. **Lactistes rastellus**, *Schiödte, in Kröy. Nat. Tidsskr.* (2) ii, p. 457 (1849); *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 614; *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 49, t. 2, f. 8 (1881).
Æthus philippinensis, *Dall. List Hem.* i, p. 118. 19 (1851).

Blackish-brown, shining, elongate, strongly and densely punctate except on the anterior part of the pronotum. Head shorter than its greatest breadth through the eyes, rugosely punctate, central lobe stronger and more prominent than the lateral lobes; rostrum reaching the intermediate coxæ, the three basal joints about equal in length, second joint a little the shortest; pronotum punctate, except on the anterior disk and the posterior margin; scutellum strongly punctate, with the apex acuminate; corium thickly and finely punctate, with three or more marginal piliferous points; anterior tibiæ with the inner margin sinuated, with a rounded tuberosity before the apex, the outer margin with five or six strong dental spines, the last near the protuberance very small; abdomen punctured.

Length 5 to 6; max. breadth 3 to 4 millim.

Hab. Bengal; Serampore. Burma: Rangoon, Palon, Toungoo, Prome, Karennee (*Fea*), Minhla (*Comotto*). Tenasserim; Thagata (*Fea*).—Also received from the Philippines.

155. **Lactistes vicinus**, *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 50, t. 2, f. 9 (1881).

Closely allied to the preceding species (*L. rastellus*), but differing from it in the much shorter, broader, and rounded apex of the tibiæ: the inner margin is without a tuberosity, whilst the outer margin possesses five or six dental spines. Head rounded, emarginate in front; pronotum punctured, the margins ciliated; the odoriferous aperture more sinuous anteriorly and posteriorly, terminating in a lobe more angularly rounded, with a small tooth at the emargination; third joint of the antennæ oval, as long as the second but stouter, fourth and fifth joints longest and equal.

Length ♀ $7\frac{1}{4}$; max. breadth $3\frac{1}{3}$ millim.

Hab. Bombay (*Leith*).

156. **Lactistes truncato-serratus**, *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 51, t. 2, f. 10 (1881).

Allied to the preceding species in form and coloration, but, according to Signoret, differing in the dilated prolongation of the

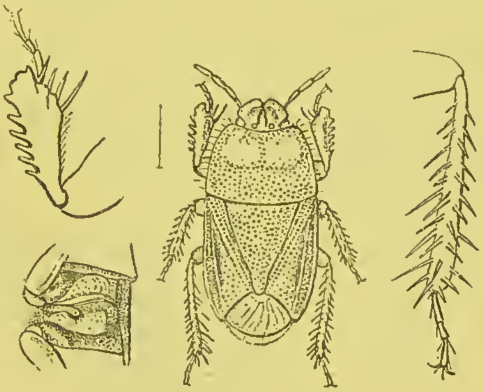

Fig. 43.—*Lactistes truncato-serratus.*

posterior tibiæ, which are short and possess at the last spine on the outer margin two emarginations, which form three rounded teeth. (Signoret must evidently have been here describing the anterior and not the posterior tibiæ.) Head rounded, emarginate in front, the central lobe shorter than the lateral lobes but free, the lateral lobes not meeting at apices; pronotum more punctate, with two irregular levigate spaces on the anterior disk; scutellum less densely punctate; corium without marginal piliferous points; abdomen punctured on the marginal areas, also punctured on the shining lateral areas of the mesosternum, and on the metasternum

near the insertion of the posterior femora; the odoriferous aperture is also distinct in construction.

Length $7\frac{1}{2}$ to 8; max. breadth $3\frac{1}{2}$ to 4 millim.

Hab. "North India" (*Signoret*). Burma: Rangoon, Palon, Teinzo, Karennee (*Fea*). Tenasserim; Thagata (*Fea*).

Genus SCOPARIPES.

Scoparipes, *Sign. Bull. Soc. Ent. Fr.* ix, p. clxxiii (1879); *Ann. Soc. Ent. Fr.* 1881, p. 202.

Type, *S. latipes*, Westw. A Malayan species.

Distribution. Oriental Region.

This genus was founded for the reception of a group of species distinguished by the form of the posterior tibiæ, which in the male sex are long, flattened, narrower at the base than at the apex, and have on the inner surface a line or margin furnished with short, very close, stiff hairs; in the female sex the same line possesses but a few hairs only; on the outer margin there are spines, as in other allied genera. The head is more or less rounded and margined with hairs and rather stout spinules; antennæ five-jointed, the third joint shorter than the second; odoriferous aperture broad, transversely grooved, terminating in a broad lobe, with the lower opening surrounded by a hood (*capuchon*).

157. **Scoparipes (?) longirostris**, *Sign. Ann. Soc. Ent. Fr.* (6) i. p. 205, t. vii, f. 24 (1881); *Atk. J. A. S. B.* lvi, p. 45 (1887).

This is a species I have not seen, and some doubt seems to exist both as to its generic position and exact habitat. Signoret's figure is here reproduced, with Atkinson's translation of his description, which is quite literal.

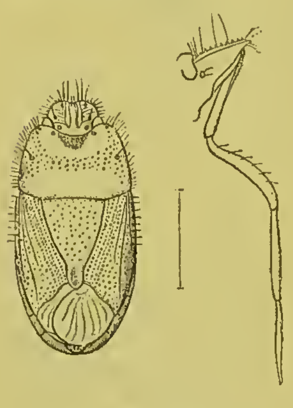

Fig. 44.
Scoparipes (?) *longirostris*.

Brown-black; somewhat parallel, elongate; rostrum and tarsi yellowish; first two joints of the antennæ black, the rest brownish. Head rounded in front, striated, finely punctured, spinulose, and ciliated on the margin; second joint of the antennæ longer than the third; rostrum very long, reaching the second ventral segment, the joints almost equal, the second joint much arched; pronotum almost square, anterior angles rounded, anterior border much emarginate and strongly impressed, finely punctured, also the lateral margins and on the median transverse line, much ciliated on the borders; scutellum rounded, impressed at the tip and very concave, disk punctured; hemelytra shorter and narrower than the abdomen, finely punctured, with 7–8 piliferous points on the external

side; membrane brown; feet black; anterior tibiæ broad, with the usual spines; abdomen glossy in the middle, punctured and striated on the sides.

Length 12; max. breadth 6 millim.

Hab. "India" (*Leyden Mus.*).

Genus ADRISA.

Adrisa, *Amy. & Serv. Hém.* p. 89 (1843); *Sign. Ann. Soc. Ent. Fr.* 1881, p. 206.
Acatalectus, *Dall. List Hem.* i, pp. 110, 122 (1851).
Geobia, *Montrouz. Ann. Soc. Linn. Lyon*, 1858, p. 245.

Type, *A. nigra*, Amy. & Serv., from Java.

Distribution. India, Burma, the Malay Peninsula, Malayan Archipelago, Australia, and Tasmania.

This genus is readily recognized by its antennæ being only four-jointed, owing to the fusion of the second and third joints; first joint short, not extending beyond the anterior margin of the head, second about as long as the third and fourth together; rostrum with the second joint thickest and longest, the fourth shortest; body oval, slightly convex; corium twice as long as the membrane; scutellum angular at the apex.

158. **Adrisa magna**, *Uhler* (Acatalectus), *Proc. Ac. N. S. Phil.* p. 222 (1860); *Sign. Ann. Soc. Ent. Fr.* (6) i, p. 206, t. 7, f. 25 (1881).

Black, shining, much punctured, the punctuation more or less confluent; head rounded in front, the lateral margins strongly and rugosely punctate, and very finely and obscurely meeting in front of the median lobe; pronotum subquadrate, the anterior angles rounded, the disk punctured excepting a smooth space on the anterior area; scutellum rugosely punctate, with a more or less distinct central carinate line; corium subopaque, thickly and finely punctate; membrane fuliginous.

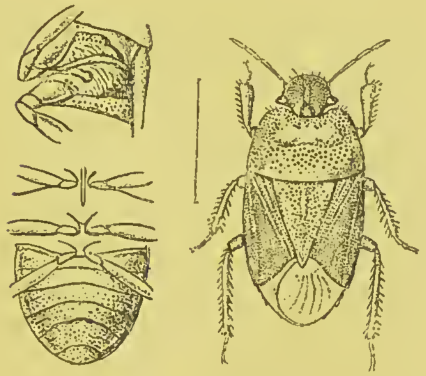

Fig. 45.—*Adrisa magna.*

Length 13 to 19 millim. (The males are much smaller than the females.)

Hab. Nága Hills (*Chennell*). Burma; Ashwe Keba (*Fea*). Tenasserim; Tavoy (*Coll. Dist.*), Myitta (*Doherty*), Meetan (*Fea*).—Also received from Hong Kong.

Genus CYDNUS.

Cydnus, *Fabr.* (part.) *Syst. Rhyng.* p. 184 (1803); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 145 (1882).
Æthus, *Dall. List Hem.* i, pp. 110, 112 (1851); *Sign. op. cit.* (6) i, p. 423 (1881).
Microporus, *Uhler, Geol. Geogr. Surv.* 1875, p. 275; *id. op. cit.* 1876, p. 10.

Type, *C. nigritus*, Fabr.
Distribution. Almost universal.

Cydnus and *Æthus* have been treated as separate genera by most writers, but it seems best to unite them, as has recently been done in Lethierry and Severin's Catalogue. The antennæ are five-jointed; body oval or ovate, slightly concave; margins of the head pilose, setose, or remotely ciliated; lobes of the head equal in length, or the lateral lobes longer than the central lobe; ostiolar canal having either at the apex a free lobe, more or less elevated, horn-shaped, and more or less flattened at the sides (*Cydnus*, Sign.), or without this appendage (*Æthus*, Sign.).

159. **Cydnus nigritus**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 123 (1794); *id. Syst. Rhyng.* p. 184 (1803); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 147, t. 6, f. 85 (1882).
Cydnus picipes, *Hahn, Wanz.* i, p. 165, f. 85 (1831).
Cydnus flavicornis, *Wolff, Ic.* p. 66, f. 63 (1801).
Æthus nigropiceus, *Scott, A. M. N. H.* (4) xiv, p. 294 (1874).

Pitchy black, shining; anterior margin of the head and lateral margins of the pronotum with long castaneous hairs; head with the anterior margin slightly concave in the middle and with four foveæ, one placed at the inner margin of each eye and one on either side of the apex of the central lobe; antennæ piceous, apex of the terminal joint pale brown; eyes reddish or brownish-red; rostrum piceous; pronotum shining; anterior margin with four foveæ, placed two on either side, between the two inner are a few punctures in a curved line, lateral and posterior margins rather broadly but finely punctured, across the disk are four somewhat obscure foveæ, the two exterior most pronounced, apex depressed; scutellum coarsely punctate; corium much more finely punctate; membrane pale fuscous; legs more or less castaneous, the tarsi ochraceous.

Length 4 to 5 millim.

Hab. Burma: Rangoon, Mandalay, Karennee (*Fea*).—Also found in Eastern Europe, Cochin China, China, and Japan.

160. **Cydnus indicus**, *Westw. in Hope Cat.* i, p. 19 (1837); *Dist. A. M. N. H.* (7) iv, p. 221 (1899); *Dall.* (Æthus) *List Hem.* i, p. 114. 5 (1851); *Sign.* (Æthus) *Ann. Soc. Ent. Fr.* (6) ii, p. 28, t. i, f. 69 (1882); *Atk.* (Æthus) *J. A. S. B.* lvi, p. 47 (1887).

Æthus perosus, *Stål, Öfv. Vet.-Ak. Förh.* 1853, p. 214. 2.
Æthus impressicollis, *Sign. Ann. Soc. Ent. Fr.* (3) viii, p. 923 (1860).
Æthus ferus, *Walk. Cat. Het.* i, p. 163. 91 (1867).

Oval or ovate, black-piceous; head somewhat obtusely rounded, somewhat coarsely punctate, the base and central lobe almost levigate, lateral margins reflexed, remotely pilose; antennæ brownish, last three joints a little incrassated, second a little shorter than the third; pronotum convex in the ♂, with a transverse impression before the middle, distinctly and somewhat densely punctate, the base and transverse space before the middle levigate, lateral margins pilose; scutellum somewhat coarsely punctate, the apex and basal angles more or less impunctate; corium finely and thickly punctate; membrane pale fuliginous.

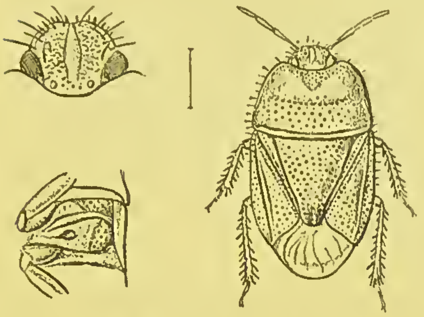

Fig. 46.—*Cydnus indicus.*

Length $5\frac{1}{2}$ to 7 millim.

Hab. Bombay (*Leith*). Burma; Teinzo (*Fea*).—Widely distributed, being found throughout Southern Africa and Madagascar; also generally in the Malay Archipelago and Australia.

161. **Cydnus ceylonicus**, *Mayr, Verh. z.-b. Ges. Wien*, xvi, p. 362 (1866); *id. Reise Nov. Hem.* p. 9 (1866); *Sign.* (Æthus) *Ann. Soc. Ent. Fr.* (6) ii, p. 30, pl. i, f. 71 (1882); *Leth. & Sev.* (part.) *Cat. Gén. Hém.* i, p. 65 (1893).

Black, shining; rostrum and antennæ brownish, apical joint of antennæ brownish-ochraceous; posterior margin of the pronotum and the corium brownish-ochraceous; clavus and posterior claval margin dark castaneous; membrane pale hyaline, the veins slightly infuscated; central lobe of the head as long as the lateral lobes; second joint of the antennæ a little longer than the third.

As Signoret remarks, this species might be easily confounded with *Macroscytus badius* or *M. subaëneus*, Dall., but can be distinguished by its greater convexity, by the absence of spines to the posterior femora, and by the structure of the odoriferous aperture.

Length 6 to $6\frac{1}{2}$ millim.

Hab. Ceylon; Elephant Pass (*E. E. Green*).—Also recorded from Java.

162. **Cydnus nigroaëneus**, *Walk.* (Æthus) *Cat. Het.* i, p. 158. 71 (1867).
Cydnus ceylonicus, *Leth. & Sev.* (part.) *Cat. Gén. Hém.* t. i, p. 65 (1893).

Black, shining. "Head largely punctured towards the border, about one-third of the breadth of the thorax; eyes red; rostrum piceous; antennæ piceous, one-third of the length of the body, joints successively increasing in length; thorax thickly punctured behind two slight transverse furrows, of which one is near the free border and the other in the middle. Scutellum rather thickly punctured; legs rather long and slender; femora slightly setose; tibiæ with rather slender spines; fore wings (corium) minutely punctured, with two striæ near the costa and with three near the hind border; membrane cinereous." (*Walker.*)

Length 10 millim.

Hab. Ceylon (*Cumming & Green*).

163. **Cydnus borrei**, *Sign.* (Æthus) *Ann. Soc. Ent. Fr.* (6) ii, p. 32, t. 2, f. 73 (1882); *Leth. & Sev. Cat. Gén. Hém.* i, p. 65 (1893).

Differing from *C. indicus*, Westw., by its much broader and almost smooth head, and by the median lobe being very narrow anteriorly and as long as the lateral lobes, which almost enclose it.

Length 7 millim.

Hab. Sylhet.

164. **Cydnus varians**, *Fabr. Syst. Rhyng.* p. 187 (1803); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 155, t. 6, f. 92 (1882); *Stål* (Æthus), *Hem. Fabr.* i, p. 6 (1868).
Æthus cyrtomenoides, *Dohrn, Stett. ent. Zeit.* xxi, p. 400 (1860).

This species is described by Stål, who examined the types of Fabricius, as in form allied to *C. indicus*, Westw., from which it differs by its smaller size, its more obtuse head, which anteriorly is very remotely and obsoletely punctate, median lobe slightly narrowed forwardly, antennæ much shorter, ocelli situate nearer to the eyes, pronotum more narrowed anteriorly, punctuation on pronotum, scutellum, and corium finer, anterior tibiæ with fewer spines but apparently longer, and the abdomen remotely, obsoletely finely punctate.

Length 4 millim.

Hab. Bengal. Bombay (*Leith*). Ceylon. Burma; Mandalay, Tenasserim.

165. **Cydnus maurus**, *Dall.* (Æthus) *List Hem.* i, p. 118 (1851); *Leth. & Sev. Cat. Gén. Hém.* i, p. 67 (1893).

Black, somewhat shining, very thickly and finely punctured. Head as long as broad, with the anterior margin semicircular, very faintly notched at the tip, lateral lobes not passing the central. Ocelli not very large, red. Thorax with a faint punctured trans-

verse furrow about the middle, the anterior and lateral margins, and the portion of the disk behind the transverse furrow, very thickly and finely punctured. Scutellum rather elongate, very thickly and finely punctured. Corium pitchy-chestnut, finely and rather thickly punctured, the punctures closer on the line of the nervures, the neighbourhood of which is darker than the rest of the surface; membrane brownish, transparent. Abdomen very thickly and finely punctured on the sides, the centre of the disk smooth, shining, impunctate; the posterior margins of the segments very minutely denticulated. Legs pitchy black, with the tarsi ferruginous. Rostrum ferruginous. Antennæ ferruginous-brown.

Length 6½ millim.

Hab. "India" (*Hardwicke Coll., Brit. Mus.*). Ceylon; Peradeniya (*Green*).

The above description is largely that of Dallas, and relates to the type, now in somewhat bad condition.

166. **Cydnus perpunctatus**, *Sign.* (Æthus?) *Ann. Mus. Civ. Genov.* xvi, p. 634 (1881); *id.* (Æthus) *Ann. Soc. Ent. Fr.* (6) ii, p. 34, t. 2, f. 75 (1882).

Black; broadly oval, much punctured over its entire surface, much ciliated on the head and pronotum; two levigate spaces on the anterior disk of the pronotum and at the basal angles of the scutellum, the last with a median carinate line.

A species to be easily recognized from any other here enumerated by its abundant punctuation.

Length 6 millim.

Hab. Bombay Presidency; Khandala (*Genoa Mus.*). Burma; Schwego-Myo, Palon (*Fea*).

Species unknown to the writer by either specimen or figure.

167. **Cydnus bengalensis**, *Leth. Bull. Soc. Ent. Belg.* 1891, p. cxlii.

"Ovate, black, profoundly and thickly punctate; head anteriorly spinuliferous; lateral margins of the pronotum furnished with numerous long reddish cilia; rostrum, antennæ, and legs brownish, tarsi ochraceous."

Stated to resemble *C. flavicornis*, Fabr., from which it differs by the denser and more coarse punctuation of the pronotum and scutellum.

"Length 4 millim."

Hab. Bengal: "Tetara."

168. **Cydnus? scutellatus**, *Dohrn* (Æthus), *Stett. ent. Zeit.* xxi, p. 400. 16 (1860); *Leth. & Sev. Cat. Gén. Hém.* i, p. 68 (1893).

"Black, shining, punctured; head and thorax with their margins reflexed and pilose; their surface convex, sparingly punctate,

laterally somewhat obliquely impressed; scutellum with the margins linearly punctate, the disk scarcely punctate; corium densely punctate; membrane fuscous; abdomen beneath shining, laterally punctate; rostrum, antennæ, and tarsi fulvous."

"Length 7 millim."

Hab. Ceylon.

Genus GAMPSOTES.

Gampsotes, *Sign. Bull. Soc. Ent. Fr.* (1881) p. xxix; *id. Ann. Soc. Ent. Fr.* (6) ii, p. 243 (1882).

Type, *G. parallelus*, Sign.

Distribution. India, Burma.

This genus is to be recognized by the length of the rostrum, which reaches the third abdominal segment, or is even longer; the second joint of the antennæ is a little longer than the third, the third shorter than the fourth. These are the dimensions of the antennal joints as given by Signoret, but the second joint of the antennæ can scarcely be regarded as longer than the third.

169. **Gampsotes parallelus**, *Sign. Bull. Soc. Ent. Fr.* 1881, p. xxix; *id. Ann. Soc. Ent. Fr.* (6) ii, p. 243, t. 8, f. 103 (1882); *Atk. J. A. S. B.* lvi, p. 52 (1887).

Two and a half times longer than broad, parallel, piceous; antennæ and the tarsi ferruginous. Rostrum very long, in some specimens reaching the third abdominal segment, in others reaching the penultimate segment (this is a variable character, but is also somewhat dependent on the direction of the head); pronotum strongly emarginate in front and punctate, except on anterior disk and posterior margin; scutellum very long, rounded at the apex, strongly punctate except at the basal angles: corium very long.

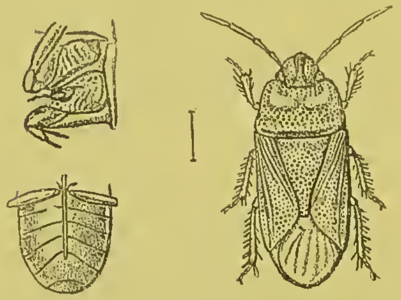

Fig. 47.—*Gampsotes parallelus.*

Length 5½ millim.

Hab. Burma: Toungoo, Schwego-Myo, Rangoon, Palon, Katha (*Fea*).

Genus MACROSCYTUS.

Macroscytus, *Fieber, Eur. Hem.* pp. 83, 362 (1861); *Stål, Hem. Afr.* i, pp. 19, 23 (1864); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 465 (1882).

Type, *M. brunneus*, Fabr.

Distribution. Palæarctic, Ethiopian, and Oriental Regions.

Among the genera of this fauna *Macroscytus* is to be recognized

by the large scutellum, and especially by the presence of a spine at the apex of the posterior femora. These are the characters relied upon by Signoret. Stål allies the genus to *Æthus*, Dall. = *Cydnus*, Fabr., but separates it by the characters of having the body very remotely ciliated and the absence of small spines to the margin of the head.

170. **Macroscytus brunneus**, *Fabr.* (Cydnus) *Syst. Rhyng.* p. 185 1803); *Fieb.* (part.) *Eur. Hem.* p. 362 (1861); *Sign.* (part.) *Ann. Soc. Ent. Fr.* (6) ii, p. 477, pl. 14, f. 136 (1882): *Atk.* (part.) *J. A. S. B.* lvi, p. 54 (1887).
Cydnus spinipes, *Fabr. loc. cit.* p. 186.
Cydnus proximus, *Ramb. Faun. Andal.* p. 112 (1839).
Æthus opacus, *Stål, Öfv. Vet.-Ak. Förh.* 1853, p. 214. 3; *Stål* (Macroscytus), *Hem. Afr.* i, p. 26. 5 (1864).

Oval; of a more or less deep brown; the varieties *brunneus* and *opacus* black, and *spinipes* more or less finely punctured; corium sometimes glossy; rostrum, base of antennæ, and the tarsi ochraceous. Head rounded in front, central lobe as long as the lateral lobes, which have 5 or 6 hairs along the margin; vertex scarcely carinate; rostrum reaching the intermediate coxæ; first and second joints of the antennæ ochraceous, the third shorter than the second; pronotum convex in front, transversely flattened, without an impression; scutellum reaching three-fourths the length of the abdomen, finely punctured on the disk; corium almost flat, finely punctate: membrane hyaline, veins infuscated: tarsi yellow, all the femora spinose beneath, posterior femora with two stout spines at apex.

Length 8 millim.

Hab. India. Ceylon (*Signoret*). Burma: Karennee (*Fea*).—A well-known European species; also found in Africa, and recorded from China.

171. **Macroscytus badius**, *Walk.* (Æthus) *Cat. Het.* i, p. 159. 73 (1867); *Dist. A. M. N. H.* (7) iv, p. 222 (1899).
Macroscytus brunneus, *Sign.* (part.) *Ann. Soc. Ent. Fr.* (6) ii, p. 477, t. 14, f. 136 (1882); *Atk.* (part.) *J. A. S. B.* lvi. p. 54 (1887).

"Tawny, elliptical, shining, slightly convex. Sides of the head and thorax with stout bristles. Head with oblique striæ on each side, a little less than half the breadth of the thorax. Antennæ about one-third of the breadth of the head; joints successively increasing in length. Thorax thinly and minutely punctured; a transverse middle furrow barely indicated. Scutellum thinly punctured. Legs thick; tibiæ with stout spines. Fore wings minutely punctured, with three striæ near the costa, and with three near the hind border; membrane pale cinereous." (*Walker.*)

M. badius, Walk., was placed by Signoret as a synonym of the preceding species (*M. brunneus*, Fabr.), but it differs from the

species of Fabricius by its uniformly paler and ochraceous coloration, and structurally by being shorter and broader.

Length 6 to 7 millim.

Hab. "India" (*Brit. Mus.*). Ceylon (*Thwaites*).—Also found in Mr. Fortune's collection from North China.

172. **Macroscytus transversus**, *Burm.* (Cydnus) *Nov. Act. Acad. Leop.* xvi, *Suppl.* i, p. 291, t. 41, f. 4 (1834); *Walk.* (Acatalectus) *Cat. Het.* i, p. 164. 2 (1867); *Stål, En. Hem.* v, p. 19. 1 (1876); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 476, t. 14, f. 135 (1882); *Leth. & Sev.* (Adrisa) *Cat. Gén. Hém.* i, p. 63 (1893).

Ovate, elongate; of a deep blackish-brown, with the rostrum, the antennæ (more or less), and the tarsi ochraceous. In mature specimens the posterior margin of the pronotum and the lateral margin of the corium are brownish-ochraceous. Allied to the following species (*M. subaëneus*), but a much broader insect.

Length 7 to 10; max. breadth 5 millim.

Hab. Ceylon (*Thwaites, Green*).—Also received from Celebes, the Philippines, and New Guinea; I possess a specimen from Formosa.

173. **Macroscytus subaëneus**, *Dall.* (Æthus) *List Hem.* i, p. 116. 11 (1851); *Leth. & Sev.* (Cydnus) *Cat. Gén. Hém.* i, p. 68 (1893); *Dist. A. M. N. H.* (7) iv, p. 222 (1899).
Macroscytus javanus, *Mayr, Verh. z.-b. Ges. Wien*, 1866, p. 361; *Leth. & Sev. t. e.* p. 71 (1893).
Æthus æqualis, *Walk. Cat. Het.* i, p. 159. 72 (1867).
Æthus indicus, *Voll. Faun. Ind. Néerl.* i, p. 17 (1868).
Macroscytus japonensis, *Scott, A. M. N. H.* (4) xiv, p. 294 (1874).

"Head black, impunctate, with the anterior margin entire, the central lobe as long as the lateral; ocelli red; pronotum brassy-black, shining, with the posterior margin dull chestnut, the lateral margins, the posterior portions of the disk, and the centre of the anterior margin finely and rather thickly punctured. Scutellum elongate, black, slightly shining, with a few scattered fine punctures. Coriaceous portion of the elytra pitchy-brown, thickly and finely punctured, the punctures larger at the base; membrane brownish, darker at the base, semitransparent at the margin. Abdomen beneath brassy-black, with the disk very smooth and shining, the sides wrinkled; the posterior

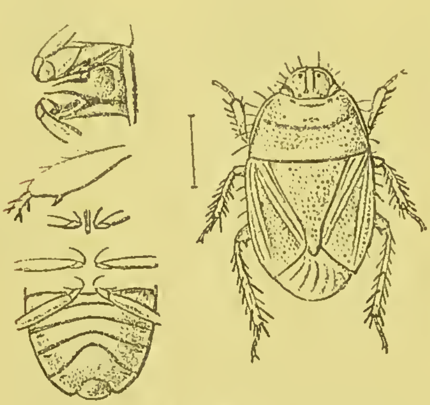

Fig. 48.—*Macroscytus subaëneus.*

margin of the segments very finely denticulated towards the sides, smooth across the disk. Sternum black, shining, slightly brassy, with a few punctures on the prosternum and with a large, opaque wrinkled patch occupying the greater part of each side of meso- and metasterna; legs black; tarsi castaneous; rostrum piceous; antennæ brown, with the second joint reddish." (*Dallas.*)

Length 8 to 9½ millim.

Hab. Bombay (*Leith*), Deccan (*Day*). Burma: Karennee, Katha, Schwego-Myo, Palon (*Fea*). Tenasserim: Thagata, Kawkareet (*Fea*).—Widely distributed throughout the Malay Archipelago and found in Japan.

174. **Macroscytus expansus**, *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 479, t. 14, f. 138 (1882).

Described as differing from the preceding species (*M. subaëneus*) by the more ciliated margin of the head and by having the third joint of the antennæ shorter than the second.

Length 7 millim.

Hab. Sikhim (*Coll. Dist.*). Bombay; Deccan (*Day*).

The type is stated by Signoret to be in my own collection, and was evidently founded on a specimen I sent my old and valued friend when he was working out the family. It is probably still in his collection now contained in the Vienna Museum.

175. **Macroscytus foveolus**, *Dall.* (Æthus) *List Hem.* i, p. 113 (1851); *Sign. Ann. Soc. Ent. Fr.* (6) ii, p. 472, t. 13, f. 131 (1882).

"Head rather small, with the anterior margin rounded, entire, the lateral lobes not meeting beyond the central; pitchy-brown, with the margins paler and fringed with fine bristles. Ocelli very large, red. Thorax pitchy-brown, with the posterior margin chestnut; anterior margin with a faint, finely punctured, transverse fovea; lateral margins finely and thickly punctured, and fringed with long, stout bristles; posterior portion of the disk finely and sparingly punctured. Scutellum pitchy-brown at the base, becoming chestnut-brown towards the apex, rather strongly but sparingly punctured; the tip with a distinct fovea. Coriaceous portion of the elytra bright chestnut-brown, thickly and finely punctured; membrane brownish, semitransparent. Abdomen beneath pitchy, very smooth, shining, with the disk impunctate, the sides thickly and finely punctured. Breast pitchy, thickly and finely punctured. Anterior legs pitchy-red; four posterior pitchy, with the coxæ reddish; all the tarsi ferruginous. Rostrum pitchy-red, with the apex pitchy. Antennæ ferruginous, dusky towards the base." (*Dallas.*)

Length 8½ to 11 millim.

Hab. North India (*Hardwicke*). Sikhim; Mungphu (*Atkinson*).—A species to be recognized by the foveate pronotum.

Genus GEOTOMUS.

Geotomus, *Muls. & Rey, Pun. France, Pent.* p. 34 (1866); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 33 (1883); *Atk. J. A. S. B.* lvi, p. 55 (1887).

Type, *G. punctulatus*, Costa. A Palæarctic species.

Distribution. Universal.

According to Signoret, *Geotomus* differs from *Cydnus* by the absence of small spines to the head. It is to be separated from *Gampsotes* by the shorter rostrum, which does not extend beyond the intermediate coxæ; the absence of the tumidity on the lateral angles of the disk of the pronotum which conceal the real angles as in *Macroscytus*, and the posterior femora being spinose at the apex, also give sufficient characters for distinguishing it. The odoriferous apertures are also structurally diverse.

176. **Geotomus pygmæus**, *Dall.* (Æthus) *List Hem.* i, p. 120 (1851); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 51, t. 3, f. 160 (1883).
Cydnus rarociliatus, *Ellenr. Nat. Tijdschr. Nederl. Ind* xxiv, p. 139, f. 7 (1862).
Cydnus pallidicornis, *Voll. Faun. Ind. Néerl., Pent.* p. 17 (1868).
Æthus pallidítarsus, *Scott, Trans. Ent. Soc.* 1880, p. 309.
Geotomus subtristis & jucundus, *Buch. White, A. M. N. H.* (4) xx, pp. 110, 111 (1877).
Æthus nanulus & platysomoides, *Walk. Cat. Het.* i, pp. 162, 163, nn. 83 & 92 (1867).
Æthus omicron, *Walk. op. cit.* iii, p. 534 (1868).

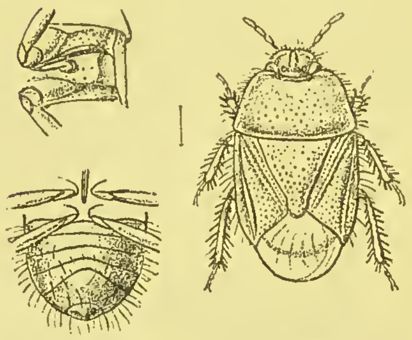

Fig. 49.—*Geotomus pygmæus.*

"Elongate-ovate, black, shining. Head with the lateral lobes sparingly punctured. Ocelli red. Thorax smooth, somewhat quadrate, transverse, with a short line of fine punctures close to the middle of the anterior margin, a line of similar punctures across the disk behind the middle, and a few scattered punctures on the sides. Scutellum long, rather thickly and finely punctured, with the base impunctate. Coriaceous portion of the elytra pitchy, very thickly and finely punctured, the punctures larger along the nervures; membrane whitish. Body beneath black; abdomen thickly and finely punctured on the sides; the disk smooth. Legs pitchy; tarsi pale orange. Antennæ pale brown, with the tips of the fourth and fifth joints paler or testaceous." (*Dallas.*)

Length $3\frac{1}{2}$ to $4\frac{1}{2}$ millim.

Hab. Bombay (*Leith*). Ceylon (*Lewis*). Burma; Bhamo, Toungoo, Rangoon, Mandalay, Kareunee, Katha, Teinzo (*Fea*).—Generally distributed throughout the Malayan Archipelago,

found in China and Japan, and recorded from New Caledonia and Hawaii.

177. **Geotomus apicalis**, *Dall.* (Æthus) *List Hem.* i, p. 120 (1851); *Dist. A. M. N. H.* (7) iv, p. 222 (1899).

Allied to *G. pygmæus*, Dall., but narrower and more elongate; central lobe of the head slightly larger than the lateral lobes; antennæ pitchy-brown, with the apex of the third joint, the apical half of the fourth, and the whole of the fifth joint ochraceous.

Length $4\frac{1}{2}$ millim.

Hab. North India (*Boyd*). Ceylon; Peradeniya (*Green*).

178. **Geotomus abdominalis**, *Sign.* (Geotomus (Anolips)) *Ann. Soc. Ent. Fr.* (6) iii, p. 219, t. 9, f. 184 (1883).

"Oval, elongate; pitchy-brown, the corium paler in colour. Head rounded in front, the central lobe broader at middle than at apex, as long as the lateral lobes and having two hairs at the apex, the lateral lobes with five hairs on the margins; vertex finely punctured; the second joint of the antennæ longer than the third; rostrum reaching the intermediate coxæ; pronotum strongly impressed in front behind the anterior indentation, finely punctate in that space and also on the transverse line and along the lateral margins; the transverse groove, absent in the middle, is visible on the sides below the piliferous points; lateral margins with fine hairs; scutellum long, narrowly rounded at the apex, the disk finely punctate, basal angles smooth and very convex; corium sparingly punctate; membrane smoky-hyaline, projecting beyond the abdomen, which is smooth in the middle, strongly punctate on the sides." (*Sign.*)

Length $3\frac{1}{2}$ millim.

Hab. "India".*

Genus **FROMUNDUS**.

Fromundus, *Dist. Tr. E. S.* 1901, p. 582.

Type, *F. opacus*, Dist.

Distribution. At present only known from Ceylon.

Body somewhat short and broad, above opaque. Head

* GEOTOMUS ELONGATUS, *Herr.-Schäff.* (Cydnus) *Wanz. Ins.* v, p. 97, t. 177, f. 546 (1839); *Muls. & Rey, Pun. France, Pent.* ii, p. 35. 38 (1866); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 212, t. 5, f. 176 (1883).
Cydnus oblongus, *Ramb. Faun. Ent. Andal.* ii, p. 115 (1839); *Dohrn* (Æthus) *Stett. ent. Zeit.* xxi, p. 400. 15 (1860); *Kirby* (Æthus) *J. Linn. Soc., Zool.* xxiv, p. 80 (1891).

This species was included by Dohrn in his list of the Heteroptera of Ceylon, a course in which he was followed by Kirby. Atkinson also gave the species in his "Notes on Indian Rhynchota," probably on the same record. Up to the time of writing I have failed to find any corroboration of the statement that the species forms part of this fauna.

moderately exserted, the eyes prominent and not resting on the anterior margin of the pronotum, lateral margins rounded, anterior margin broad, subtruncate, central lobe as long as the lateral lobes, the margins with about twelve long hairs; antennæ five-jointed, first and second joints shortest, most slender, and subequal in length; third, fourth, and fifth joints incrassated, fifth longest; rostrum reaching the intermediate coxæ, second joint reaching the anterior coxæ; pronotum broader than long, anterior margin concavely excavated for the insertion of the head, the anterior angles broadly prominent, extending beyond the outer margins of eyes, lateral margins slightly obliquely rounded and furnished with some scattered long hairs; scutellum longer than broad, reaching to about two-thirds the length of the abdomen, lateral margins slightly convex and narrowed to apex; corium about two thirds the length of the abdomen, outer margin moderately dilated and convex, much broader than abdomen, posterior margin slightly sinuate; membrane short; anterior tibiæ moderately dilated, with five or six spines on their outer margin and with two apical spines; intermediate and posterior tibiæ longly spinous on both sides.

179. **Fromundus opacus**, *Dist. Tr. E. S.* 1901, p. 583.

Dull dark castaneous, very closely and thickly punctate, the lateral margins of the corium paler in hue; antennæ and rostrum ochraceous; sternum and legs castaneous; abdomen piceous, shining; membrane pale hyaline. Pronotum with two obscure dull discal patches; scutellum with a levigate spot near each basal angle; the upper surface very thickly and somewhat coarsely punctate; abdomen beneath finely punctate.

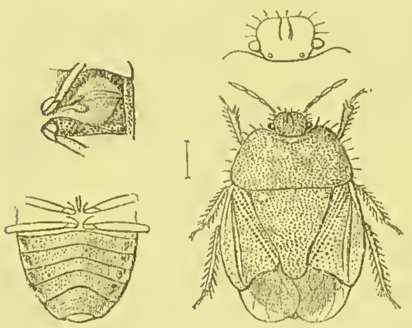

Fig. 50.—*Fromundus opacus.*

Length 4; max. breadth 3 millim.

Hab. Ceylon (*Green*).

Genus BRACHYPELTA.

Brachypelta, *Amy. & Serv. Hém.* p. 89 (1843); *Sign. Ann. Soc. Ent. Fr.* (6) iii. p. 357 (1883).
Cydnus, *Dall. List Hem.* i, p. 110 (1851).

Type, *B. aterrima*, Forst.
Distribution. Palæarctic, Ethiopian, Oriental, and Australian Regions.

Brachypelta is distinguished from all the preceding genera by the form of the scutellum, which is short, triangular, with the

basal longer than the lateral margins: the apical margin of the corium is bisinuated; the median lobe of the head shorter than the lateral lobes which meet in front of it, their margins without spines.

180. **Brachypelta aterrima**, *Forst.* (Cimex) *Nov. Sp. Ins.* p. 71 (1771); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 357, t. 9, f. 186 (1883); *Atk.* (Cydnus), *J. A. S. B.* lvi, p. 50 (1887).
Cimex niger, *De Geer, Mém.* iii, p. 269 (1773).
Cimex tristis, *Fabr. Syst. Ent.* p. 716 (1775); *id.* (Cydnus) *Syst. Rhyng.* p. 185 (1803); *Am. & Serv.* (Brachypelta) *Hém.* p. 90 (1843).
Cydnus carbonarius, *Fourcr. Ent. Paris.* p. 217. 72 (1785).
Cydnus spinipes, *Schrank, En. Ins. Austr.* p. 273 (1781).

Oval, elongate, deep black, finely punctured; base of vertex, anterior disk of pronotum, and basal angles of the scutellum smooth, the last a little elevated: body beneath levigate, the lateral areas more or less granulate or punctate; femora with

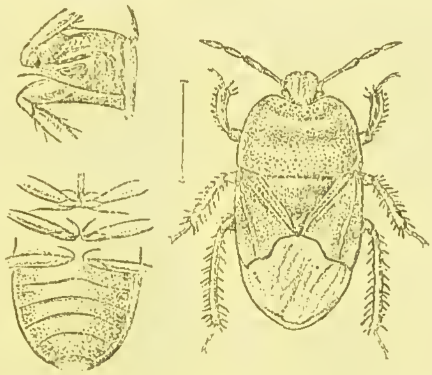

Fig. 51.—*Brachypelta aterrima.*

several rows of spinous hairs; anterior and intermediate femora with two apical spines; anterior tibiæ strongly amplified, the apical area having eleven strong spines on the external margin and four on the internal margin and at the apex, several others on the anterior and posterior disk; trochanter, rostrum, and antennæ piceous.

Length 10 to 13 millim.

Hab. N.W.P.: Hardwár (*Atkinson*). Bombay (*Coll. Dist.*).—Common to the Palæarctic Region, abundant in North Africa. Queensland.

Genus HEURNIUS.

Heurnius, *Dist. Tr. E. S.* 1901, p. 105.

Type, *H. typicus*, Dist.

Distribution. Burma, according to present knowledge.

Body elongate, apex of abdomen slightly attenuated, narrower than pronotum. Head truncate anteriorly, the lateral lobes

reflexed and somewhat concave. Antennæ five-jointed, the second joint either very small or only shorter than third. Pronotum broader than long, the lateral margins straight but convexly rounded towards apical angles, posterior margin straight, anterior margin moderately concave. Scutellum small, triangular, about one-third the length of abdomen. Corium small, the apical margin concavely sinuate; membrane large, a little more than half the length of abdomen. Anterior tibiæ dilated and spined at apices.

181. **Heurnius typicus**, *Dist. Tr. E. S.* 1901, p. 106.

Black; posterior margin of the pronotum, the scutellum and the corium dark castaneous; antennæ ochraceous; membrane greyish; legs castaneous; the tarsi ochraceous. Body above thickly and very coarsely punctate; central lobe of head with the apical angles prominent.

Length 4 millim.

Hab. Burma; Karennee, Ashwe Keba (*Fea*).

182. **Heurnius erebus**, *Dist. Tr. E. S.* 1901, p. 106.

Black, shining, antennæ pale castaneous; legs dark castaneous, tarsi ochraceous; membrane pale greyish. Body above very thickly

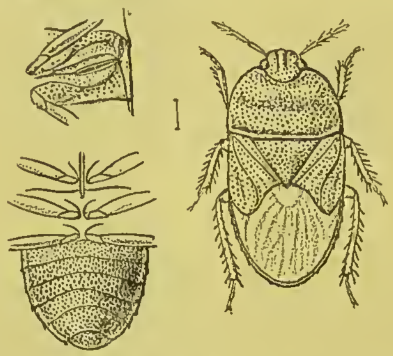

Fig. 52.—*Heurnius erebus.*

and coarsely punctate; pronotum with a discal transverse impression.

Length $3\frac{1}{2}$ millim.

Hab. Burma; Rangoon, Palon (*Fea*).

Genus **GARSAURIA.**

Garsauria, *Walk. Cat. Het.* iii, p. 536 (1868); *Dist. A. M. N. H.* (7) iv, p. 224 (1899).
Microrhynchus, *Sign. Bull. Soc. Ent. Fr.* 1882, p. lxiii; *Ann. Soc. Ent. Fr.* (6) iii, p. 524 (1883).
Microrrhamphus, *Bergr. Rev. d'Entom.* t. x, p. 214 (1891).

Type, *G. aradoides*, Walk.

Distribution. As at present known, a single species ranges from Burma to New Guinea.

The principal distinguishing characters of this genus are the membrane much larger than the corium; scutellum short, rounded at the apex; second joint of the antennæ minute and scarcely visible; the apical margin of the corium not well defined, not distinctly separated from the base of the membrane.

Signoret's description of his previously described genus is the most correct. Walker altogether overlooked the short second joint of the antennæ, which he described as four-jointed.

183. **Garsauria aradoides**, *Walk. Cat. Het.* iii, p. 536 (1868); *Dist. A. M. N. H.* (7) iv, p. 224 (1899).
Microrhynchus beccarii, *Sign. Ann. Ent. Soc. Fr.* (6) iii, p. 525, t. xv, f. 205 (1883).

Black, somewhat shining; apices of the third, fourth, and fifth joints of the antennæ, membrane, and the tarsi pale brownish; head, pronotum, scutellum, and corium somewhat thickly punctate; pronotum with a very distinct transverse impression which does not reach the lateral margins, which with the anterior disk are somewhat gibbous; an oblique dull levigate spot near each basal angle of the scutellum.

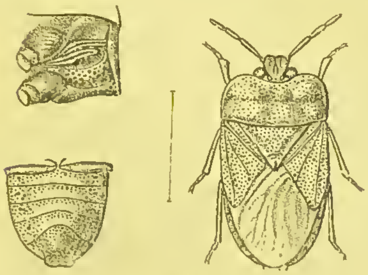

Fig. 53.—*Garsauria aradoides.*

Length 10 millim.

Hab. Burma; Rangoon (*Atkinson*). Also received from Borneo and New Guinea.

Genus CYDNOPELTUS.

Cydnopeltus, *Sign. Bull. Soc. Ent. Fr.* 1881, p. xxviii; *Ann. Soc. Ent. Fr.* (6) iii, p. 359 (1883).

Type, *C. horvathi*, Sign. A Javan species.

Distribution. At present only recorded from Burma and Java.

Differing from *Brachypelta* by the median lobe of the head not being enclosed by the lateral lobes; by the equilateral scutellum, the concave anterior disk of the pronotum, &c.

184. **Cydnopeltus minutus**, *Dist. Tr. E. S.* 1901, p. 105.

Pale castaneous; antennæ with the apices of the joints distinctly paler; head somewhat irregularly, coarsely and longitudinally carinate; pronotum depressed and levigate near anterior margin, where there is a distinct central longitudinal incision, remaining area sparingly punctate and with a transverse central incision; scutellum sparingly punctate and transversely wrinkled

from beyond base, depressed near apex; corium sparingly punctate, the internal area and lateral margin ochraceous; membrane pale ochraceous.

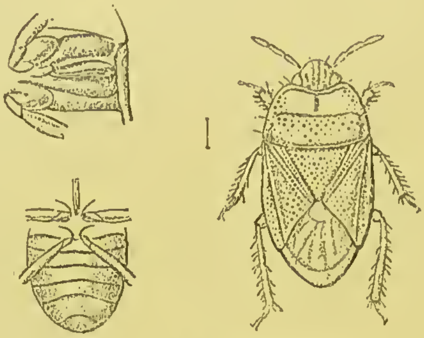

Fig. 54.—*Cydnopeltus minutus.*

Length 3 millim.
Hab. Burma; Karennee, Ashwe Keba (*Fea*).

185. **Cydnopeltus incisus,** *Dist. Tr. E. S.* 1901, p. 105.

Black, shining. Head with the lateral marginal areas thickly and coarsely punctate, the disk more sparsely punctate; antennæ dark castaneous, the apices of the joints somewhat paler; pronotum glabrous, with a deep straight discal transverse impression; scutellum with a basal series of punctures, the lateral margins coarsely and linearly punctate for a little beyond base, the disk rugulose and with some scattered very deep punctures; corium coarsely punctate excepting the inner apical area which is levigate; membrane very pale brown.
Length 6; breadth 4 millim.
Hab. Burma; Teinzo (*Fea*).

Genus **CHILOCORIS.**

Chilocoris, *Mayr, Verh. z.-b. Ges. Wien,* xiv, p. 907 (1864); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 517 (1883); *Atk. J. A. S. B.* lvi, p. 57 (1887).
Amnestoides, *Sign. Bull. Soc. Ent. Fr.* 1880, p. viii.

Type, *C. nitidus,* Mayr.
Distribution. India, Java, Eastern Siberia.
"Margin of head with erect spinules; central lobe of the head as long as the lateral lobes; eyes prominent; ocelli distinct; antennæ five-jointed, second joint scarcely half as long as the third; anterior and lateral margins of the pronotum elevated; scutellum short, triangular, reaching the base of the fourth abdominal segment; odoriferous orifice with a long furrow, with a rounded elevated

lobe at the apex; anterior tibiæ gradually broader towards the apex, externally spinosely pectinated; tarsi inserted at the apex of the tibiæ." (*Mayr.*)

186. **Chilocoris nitidus,** *Mayr, Verh. z.-b. Ges. Wien,* xiv, p. 907 (1864); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 518 (1883).

"Shining, piceous-black; posterior margin of the pronotum, corium, antennæ, rostrum, and legs pale castaneous; head strongly,

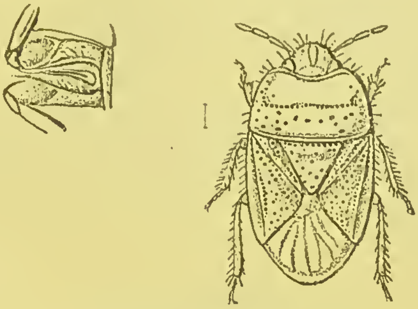

Fig. 55.—*Chilocoris nitidus.*

posterior area of pronotum and corium finely punctured; scutellum somewhat coarsely punctate; membrane hyaline; abdomen levigate." (*Mayr.*)

Length 5 millim.*

Hab. Kashmir.—Also received from Japan (*Lewis*).

187. **Chilocoris piceus,** *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 518, pl. 15, f. 201 (1883).
Chilocoris nitidus, *Mayr*?

Blackish-brown, paler in colour on the corium and on the lateral and posterior margins of the pronotum. Head broad, eyes very stout, ocelli nearer to the eyes than to the median line; vertex with a longitudinal impression, median lobe broader in the middle than towards apex; pronotum strongly margined in front with a longitudinal line and impressions, anterior disk levigate, transverse impressions very distinct with a line of dots, posterior disk weakly punctate; scutellum blunt at the apex, sparingly punctate on disk, more so but more finely on lateral margins; corium strongly punctate along the cubital veins, with two series of lines on the clavus, apical area finely punctate, almost levigate at base; membrane ochraceous, hyaline; meso- and metasterna opaque.

Length $3\frac{1}{2}$ millim.

Hab. "India."

* A specimen examined and returned to me by Signoret when writing his Monograph, as *C. nitidus,* from which fig. 55 is taken, measures only 3 millim. Mayr's type specimen is reported in bad condition.

188. **Chilocoris parumpunctatus**, *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 520, pl. 15, f. 202 (1883); *Atk. J. A. S. B.* lvi, p. 58 (1887).

This species is distinguished by the serrated margins of the pronotum and of the base of the corium, from the serration issue hairs, nine on the pronotum and six on the corium. Pale castaneous, shining, weakly punctured on the head; median lobe much amplified in the middle, narrow at the apex and on the vertex, much broader than the lateral lobes; pronotum strongly margined in front with 3–4 stout points; scutellum rounded at the apex, sparingly and strongly punctate on disk, more densely punctate near margins; corium almost levigate, densely punctate along the cubital suture, the clavus exhibiting a complete line along the suture and a half line near the scutellum; a second line of punctures on the external radial vein and a strong impunctate line, not extending beyond the middle, on the internal radial vein; membrane hyaline, extending beyond the abdomen, which is levigate; meso- and metasterna opaque.

Length $2\frac{1}{4}$ millim.

Hab. "India."

Genus PELTOXYS.

Peltoxys, *Sign. Bull. Soc. Ent. Fr.* 1880, p. xxxiii; *id. Ann. Soc. Ent. Fr.* (6) iii, p. 522 (1883); *Atk. J. A. S. B.* lvi, p. 59 (1887).
Legnotus, *Stål (nec Schiödte), Hem. Fabr.* p. 7 (1868).

Type, *P. brevipennis*, Fabr.

Distribution. Oriental Region.

Scutellum short, almost equilateral, apex acuminate; membrane very large but not projecting beyond the abdomen; rostrum short, scarcely extending beyond the anterior coxæ; intermediate femora ciliated and with four stout spines at the apex; anterior tibiæ a little dilated, the posterior tibiæ straight; odoriferous aperture broad, long, with an opening of one half its size.

189. **Peltoxys brevipennis**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 536 (1798); *id.* (Cydnus) *Syst. Rhyng.* p. 187 (1803); *Walk.* (Æthus) *Cat. Het.* i, p. 158 (1867); *Stål* (Legnotus), *Hem. Fabr.* i, p. 8 (1868); *Sign. Ann. Soc. Ent. Fr.* (6) iii, p. 522, pl. 15, f. 203 (1883); *Atk. J. A. S. B.* lvi, p. 59 (1887).
Peltoxys pubescens, *Sign. Bull. Soc. Ent. Fr.* 1880, p. xxxiv.

"Black, shining, above and beneath very densely and distinctly punctate; first joint of the antennæ and the rostrum piceous; tarsi pale yellowish piceous; central lobe of the head remotely punctured towards the base, impunctate towards the middle, transversely rugose; pronotum at centre almost twice as long as the head, convex towards the margins, behind the middle and anteriorly transversely slightly depressed, somewhat convex before the middle; clavus with two series of punctures; corium in the interior part behind the middle with fonr rows of punctures,

towards the base and on the exterior part sparsely punctured: membrane fuscous." (*Stål.*)

Length $4\frac{1}{3}$ millim.

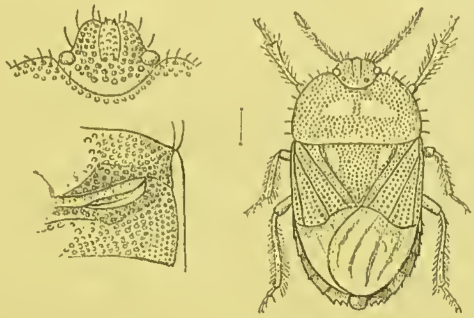

Fig. 56.—*Peltoxys brevipennis.*

Hab. Tranquebar.—Also reported from Saigon.

Genus NISHADANA.

Drupadia, *Dist. A. M. N. H.* (7) iv, p. 223 (1899), *nom. præocc.*
Nishadana, *Dist. loc. cit.* p. 442, *n. nom.*

Type, *N. typica*, Dist.
Distribution. North India, Burma.

Allied to *Chilocoris*, Mayr, but differing by the scutellum, which is broader, less angulated posteriorly, its apex broader and subacutely angulated. Corium a little shorter than the membrane. The body is relatively shorter and broader.

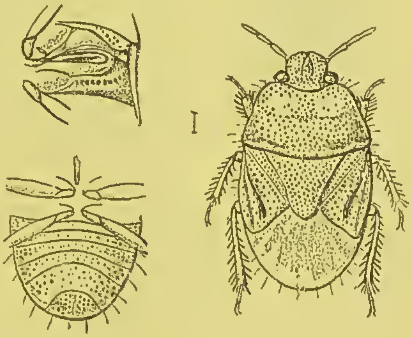

Fig. 57.—*Nishadana typica.*

190. **Nishadana typica**, *Dist.* (Drupadia) *A. M. N. H.* (7) iv, p. 223 (1899).

Head, pronotum, scutellum, and body beneath dark chocolate-brown. Corium very pale stramineous, with scattered coarse

darker punctures, and with a curved chocolate linear streak on disk; membrane pale greyish-hyaline; antennæ and legs reddish-brown. Pronotum and scutellum somewhat thickly and coarsely punctate.

Length 3 millim.

Hab. Bengal; Lohardaga (*Atkinson*), Ranchi. Burma; Rangoon (*Fea*).

Genus SEHIRUS.

Sehirus, *Amy. & Serv. Hém.* p. 96 (1843); *Sign. Ann. Soc. Ent. Fr.* (6) iv, p. 51 (1884).
Legnotus, *Schiödte in Kröy., Nat. Tidsskr.* ii, p. 464 (1849).

Type, *S. morio*, Linn. A Palæarctic species.

Distribution. Wide and general.

Pronotum strongly furrowed, with the margins ridged; mesosternum finely keeled; metasternum not keeled; head with the lateral lobes generally completely surrounding the median lobe: second joint of the antennæ equal to or a little shorter than the third joint; tibiæ strongly spined, 13 spines on the external margin above, 8 or 9 on the lower margin, 3 on the apex, 4 larger on the internal margin.

191. **Sehirus orientalis**, *Dist. Tr. E. S.* 1901, p. 583.

Head, pronotum, scutellum, body beneath, and legs black; corium very dark castaneous, with two small discal ochraceous spots placed one above the other; membrane hyaline, the venation brownish; tarsi ochraceous; antennæ brownish, the apical joint palest. Head broad, strongly punctate; pronotum strongly punctate, with a strong transverse central impression, and with three longitudinal furrows on posterior half; scutellum thickly punctate, lateral areas prominently grooved, a faint central carinate line, and the apex a little depressed; corium coarsely punctate, the veins very prominent.

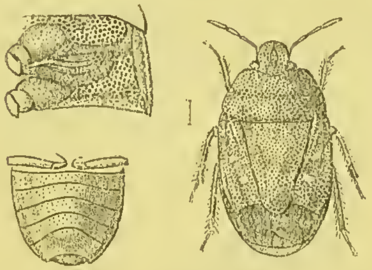
Fig. 58.—*Sehirus orientalis.*

Length 3 millim.

Hab. Burma; Karennec (*Coll. Dist.*).

Atkinson in his "Notes on Indian Rhynchota" has included the genus *Tritomegas* in the fauna. For this I can find no corroboration. He evidently followed Signoret who, in describing the distribution of *T. bicolor*, Linn. (now generally included in the genus *Sehirus*), wrote "Europe and Asia." There is, however, no record of the species occurring in India or other parts of our region.

Subfamily V. PENTATOMINÆ.

Pentatomida, *Stål, Hem. Afr.* i, p. 32 (1864); *id. En. Hem.* v, p. 28 (1876), part.

The Pentatominæ agree with the remaining subfamilies of the Pentatomidæ in having a somewhat common facies, and are thus easily recognized. The fundamental structural characters of this subfamily are the following:—The primary and subtended veins of the hemelytra are generally found close together and more or less parallel to each other, but diverging at the apex; hamus usually absent; scutellum variable in size. With the exception of the subfamily Tessaratominæ the remaining Pentatomidæ have the spiracles of the basal ventral segment hidden by the posterior area of the metasternum, and excluding the Acanthosomatinæ have the tarsi of three joints. In conjunction with the following subfamily (Asopinæ) the rostrum is of variable length, but extending beyond the anterior coxæ, the basal joint distinct and seldom shorter than the bucculæ.

The rostrum in the Pentatominæ is slender, more or less remote from the labrum, which is inserted below the apex of the central lobe to the head; bucculæ parallel, not united posteriorly.

In the divisional arrangements of genera, I have in some cases differed from the views of Stål, which have hitherto been generally followed.

Division *HALYARIA*.

This division corresponds to Dallas's family Halydidæ (List Hem. i, p. 150, 1851).

Abdomen beneath with a more or less distinct longitudinal sulcation; head long; rostrum extending beyond the posterior coxæ; antennæ of from three to five joints, remote from the eyes: third joint of the rostrum much longer than the fourth; eyes very prominent.

Synopsis of Genera.

A. Anterior and posterior tibiæ dilated. .... ERTHESINA, p. 117.
B. Posterior tibiæ simple, anterior tibiæ sometimes dilated.
  a. Central lobe of head usually as long as lateral lobes or longer.
    a. Head elongated, tapering in front.
      a′. Head longer than the pronotum .. HALYS, p. 119.
      b′. Head about same length as pronotum .... AGÆUS, p. 120.
    b. Head rounded or truncated at the apex.
      a′. Lateral margins of head toothed near apex .... DALPADA, p. 109.

b'. Lateral margins of head unarmed.
a². Rostrum slightly passing the posterior coxæ .... NEVISANUS, p. 122.
b². Rostrum reaching the third abdominal segment .... ASYLA, p. 123.
b. Lateral lobes of the head longer than the central lobe.
a. Basal joint of antennæ not reaching apex of head.
a'. Veins of membrane simple ...... APODIPHUS, p. 115.
b'. Veins of membrane reticulated .. ORTHOSCHIZOPS, p. 124.
b. Basal joint of antennæ reaching apex of head .... SURENUS, p. 116.

Genus **DALPADA**.

Dalpada, *Amy. & Serv. Hém.* p. 105 (1843).
Udana, *Walk. Cat. Het.* iii, p. 549 (1868).

Type, *D. aspersa*, Amy. & Serv. A Malayan species.

Distribution. Madagascar, India, and throughout the Malayan Archipelago.

Body oval or ovate; head very slightly convex, lateral lobes more or less distinctly sinuate at their apices, outwardly or obliquely truncated; bucculæ reaching the base of the head, angulated anteriorly; antennæ five-jointed, slender, the first joint not or very slightly extending beyond the apices of the lateral lobes; eyes globose, prominent; ocelli in a line with the base of the eyes; rostrum extending beyond the posterior coxæ; anterior lateral margins of the pronotum crenulated; membrane with about six simple longitudinal veins; mesosternum carinated; abdomen moderately sulcated on basal area; tibiæ furrowed, anterior tibiæ sometimes dilated.

A. Anterior tibiæ prominently dilated.

192. **Dalpada oculata**, *Fabr.* (Cimex) *Syst. Ent.* p. 703 (1775); *Dall. List Hem.* i, p. 184 (1851).
Dalpada aspera, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 140, f. 8 (1862).
Dalpada nodifera & indeterminata, *Walk. Cat. Het.* i, pp. 222, 225. 15, 19 (1867).

Ochraceous, prominently marked and mottled with dark olivaceous-green, scutellum with the basal angles and apex broadly pale levigate ochraceous; head dark greenish, with a basal central fascia, two discal anterior fasciæ, and some spots near eyes ochraceous; antennæ brownish, streaks to basal joint and bases of fourth and fifth joints ochraceous; pronotum with obscurely defined submarginal and oblique discal fasciæ and the lateral angles dark greenish, the last with an apical pale ochraceous spot; connexivum alternately dark green and ochraceous; membrane pale smoky grey, with the veins darker; body beneath and legs

ochraceous; lateral margins of head, sternum, and abdomen, apices of femora, bases and apices of tibiæ, apical joints of tarsi, centre of mesosternum, and subapical spot and anal appendage to abdomen very dark greenish or black; abdominal marginal fascia with large

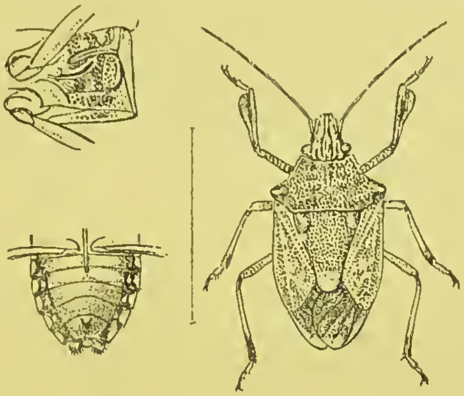

Fig. 59.—*Dalpada oculata.*

outer and small inner ochraceous spots. Head, pronotum, and scutellum coarsely punctate, the corium more sparsely and finely punctate; lateral pronotal angles inwardly broadly distinctly furrowed. Rostrum just passing the posterior coxæ.

Length 15 to 18; breadth between pronotal angles 8 to 9 millim.

Hab. Sikhim. Khási Hills (*Chennell*), Margherita (*Ind. Mus.*). Calcutta. Burma: Bhamo, Karennee, Minhla, Palon. Tenasserim: Malewoon, Myitta.—Also common in the Malay Peninsula.

Worn specimens of this species have the distinctive dark green markings absent or very obsolete.

One of these discoloured specimens from Assam apparently deceived Mr. Atkinson, who (J. A. S. B. 1888, p. 1) identified it as *D. trimaculata*, Westw., and included that species in the Indian fauna. I possess an Assam specimen sent to me by Mr. Atkinson which has a strong superficial resemblance to Westwood's species, but is structurally distinct. *D. trimaculata* is apparently confined to the Malay Archipelago.

B. Anterior tibiæ not prominently dilated.

a. *Pronotal angles more or less nodulose and inwardly furrowed.*

193. **Dalpada nigricollis**, *Westw.* (Halys) *in Hope Cat. Hem.* i, p. 22 (1837); *Dall. List Hem.* i, p. 184 (1851).
Halys obscura, *Westw. loc. cit.*

Greyish luteous, very thickly punctured with brassy black; pronotum sometimes with a slender discal median line, in front of

which are four minute ochraceous spots in a transverse series; anterior lateral margins of the pronotum moderately serrate, posterior angles prominent, very slightly recurved, inwardly with two furrows; scutellum with the basal angular margins ochraceous; membrane pale fuliginous, the veins much darker and with a series of irregular subapical fuscous spots; body beneath dark ochraceous, the lateral areas darkly punctate, longitudinal disk of abdomen reddish and impunctate; antennæ fuscous, base of fourth and fifth joints ochraceous; rostrum reaching the third abdominal segment.

Length 15 to 18; breadth between pronotal angles 8 to 9 millim.

Hab. Punjab; Srinagar and Jhelum (*Coll. Dist.*). Nepal. Bengal.—In my own collection is a large series from West China.

194. **Dalpada affinis**, *Dall. List Hem.* i, p. 185 (1851).

Closely allied to *D. nigricollis*, but paler in hue; head larger; lateral angles of the pronotum shorter, more tuberculous, and more or less ochraceous at their apices; abdomen beneath less punctate, the discal impunctate area larger and paler.

Length 17 to 18; breadth between pronotal angles 8 millim.

Hab. Sikhim (*Ind. Mus.*). Upper Tenasserim (*Coll. Dist.*).

195. **Dalpada jugatoria**, *Leth. Ann. Soc. Ent. Belg., Bull.* 1891, p. cxlii.

Body above ochraceous, thickly, coarsely, and darkly punctate; apical fourth of scutellum luteous, indistinctly and sometimes distinctly punctate; lateral angles of the pronotum olivaceous green with an ochraceous apical spot, connexivum alternately greenish and ochraceous; membrane pale fuliginous, the veins darker, and with a series of fuliginous apical spots: body beneath a little paler than above, the punctures confined to the lateral areas, the lateral margins of the head, sternum, and abdomen shining metallic green; legs ochraceous, more or less finely spotted with fuscous; antennæ ochraceous, fourth and fifth joints and the apex of third joint fuscous, bases of fourth and fifth joints luteous.

Antennæ with the third joint slightly shorter than the second, fourth, or fifth joints; lateral lobes of the head distinctly longer than the central lobe; lateral pronotal angles prominent, subnodulose, inwardly with two distinct grooves; rostrum very slightly passing the posterior coxæ.

Length 13 to 17; breadth between pronotal angles 6 to 8 millim.

Hab. Sikhim; Kurseong (*Leth.*); Khási Hills (*Chennell*); Nága Hills (*Doherty*). Burma; Karennee (*Fea*).

196. **Dalpada varia**, *Dall. List Hem.* i, p. 185 (1851).
Dalpada apicifera, *Walk. Cat. Het.* i, p. 222. 14 (1867).

Ochraceous, coarsely punctate, much shaded with bright metallic green, the green most prominent on the lateral margins and the discal fasciæ on the head, pronotum, and scutellum; on the corium

the green is more macular and more obscure, and there are also distinct purplish suffusions; connexivum spotted with bright shining green; membrane fuliginous, the veins a little darker: body beneath ochraceous; lateral margins of head, sternum, and abdomen, and coxal spots bright shining green; a subapical black spot to abdomen; antennæ fuscous, the bases of the fourth and fifth joints luteous, the second joint a little shorter than the third or fourth; lateral lobes of the head a little longer than the central lobe, their apices subacute and slightly recurved upwards; pronotal lateral angles prominent, subnodulose, inwardly with two distinct grooves; rostrum reaching the apex of the second abdominal segment.

Length 18; breadth between pronotal angles 9 millim.

Hab. Bhutan (*Coll. Dist.*); Sylhet (*Brit. Mus.*). Assam; Margherita and Nága Hills (*Doherty*).

197. **Dalpada mirabilis**, *Dist. A. M. N. H.* (6) xi, p. 389 (1892).

Olivaceous-green; a central elongate spot at base of head, its lateral margins, a central fascia, not extending beyond centre, and a narrow transverse fascia on anterior area of pronotum, five small basal spots and an obscure posterior central fascia to scutellum, lateral margins, apex, and the whole inner area of corium, castaneous; membrane very dark castaneous: body beneath and legs ochraceous; lateral margins of head, sternum, and abdomen somewhat broadly olivaceous green; sternum with transverse spots of the same colour and with two large black spots between the anterior and intermediate coxæ; intermediate and posterior femora spotted with castaneous; posterior tibiæ with the base and apex castaneous. (Anterior legs, intermediate tibiæ, and antennæ mutilated.) Abdomen beneath with a central black spot on the penultimate segment. Lateral angles of the pronotum moderately prominent and nodulose; lateral lobes of the head slightly longer than the central lobe.

Length 25; breadth between pronotal angles 13 millim.

Hab. Nága Hills (*Doherty*).—The type specimen still remains the only example of this large and magnificent species, so that the original description cannot be amplified.

198. **Dalpada clavata**, *Fabr.* (Cimex) *Ent. Syst. Suppl.* p. 532 (1798); *Dall. List Hem.* i, p. 184 (1851).

Halys latipes & concinna, *Westw. in Hope Cat.* i. p. 23 (1837).

Dalpada bulbifera & consobrina, *Walk. Cat. Het.* i, pp. 223, 225, 16, 20 (1867).

Closely allied to the following species (*D. versicolor*), but with the head longer, lateral angles of the pronotum more obtuse and nodulose, and inwardly marked with two furrows; abdomen beneath sometimes with a double series of dark discal spots.

Length 14 to 17; breadth between pronotal angles 7 to 8 millim.

Hab. Assam; Margherita (*Doherty*). Khási Hills (*Chennell*). Bombay. Burma; Bhamo, Teinzo, Palon (*Fea*). Tenasserim: Myitta (*Doherty*).—Also received from Siam.

b. *Pronotal angles subacute, neither prominently nodulose nor inwardly furrowed.*

199. **Dalpada versicolor**, *Herr.-Schaeff.* (Halys) *Wanz. Ins.* v, p. 76, t. 169, f. 520 (1839); *Dall. List Hem.* i, p. 185 (1851).

Obscure ochraceous, variegated with bronzy or dark green markings; head elongate, with the central lobe extending a little beyond the lateral lobes, which have their margins biannulate; antennæ slender, fuscous, fifth joint luteous at base; pronotum with the lateral margins moderately serrated anteriorly, the lateral angles subacute; scutellum with the basal angular margins palely levigate, its apex long and slender; connexivum alternately ochraceous and green: body beneath and legs ochraceous, lateral margins much as in *D. oculata*, but more broken and powdery and with a distinct series of reddish-orange spots on outer margin. Rostrum reaching the apex of the fourth abdominal segment.

Differing from *D. oculata* by the longer head, more elongate scutellum, subacute and not nodulose pronotal angles, and by the non-dilated anterior tibiæ.

Length 15 to 18; breadth between pronotal angles 7 to 8 millim.

Hab. North India (*Brit. Mus.*). Nilgiri Hills (*Hampson*).—Originally described from a Javan specimen.

200. **Dalpada pilicornis**, *Stål, En. Hem.* v, p. 44 (1876).

Stramineous; head, pronotum, corium, and sternum darkly punctate, the punctures brassy-black, an indistinct median line and the apices of the pronotal angles less densely punctate; lateral pronotal angles somewhat broadly prominent, but not distinctly nodulose, brassy-black, and with a distinct furrow inwardly; scutellum darkest on basal area, the apical area sparsely punctate, and with a somewhat large elongate levigate ochraceous spot at each basal angle; membrane fuliginous, the veins darker; connexivum alternately dark blackish-green and ochraceous; abdomen beneath reddish-ochraceous, the disk impunctate, the lateral areas somewhat thickly darkly punctate, the apical segmental angles brassy-green; antennæ fuscous, bases of fourth and fifth joints ochraceous, second joint shorter than third; central lobe of the head scarcely longer than the lateral lobes; rostrum reaching the apex of the second abdominal segment.

Length 10 to 15; breadth between pronotal angles 6 to 7 millim.

Hab. Nilgiri Hills (*Hampson*).

201. **Dalpada brevivitta**, *Walk. Cat. Het.* i, p. 224 (1867).

Ochraceous, thickly and darkly punctate; pronotum with a broad longitudinal impunctate fascia on disk, narrowed anteriorly, where it contains a few black punctures, and with three black punctures in a longitudinal series at base, on each side of this fascia on anterior area are two waved ochraceous lines; scutellum with the angles narrowly ochraceous, levigate; connexivum dark

olivaceous-green with ochraceous spots; body beneath ochraceous, lateral areas of sternum and abdomen darkly punctate; abdomen with a central longitudinal line, a transverse line at each stigma, inner margin, and apical margins of each segment black; legs ochraceous, femora finely spotted with black, bases and apices of tibiæ narrowly and tarsi (excluding base) black; antennæ ochraceous, inner margin of basal joint and fourth joint—excluding base—black, fifth joint mutilated; membrane fuliginous, the veins darker, the margins obscurely spotted.

Pronotum with the lateral margins strongly sinuated, the lateral angles subprominent, acute, and recurved; anterior lateral margins somewhat strongly serrated.

Length 15; breadth between pronotal angles 6 millim.

Hab. Cachar (*Brit. Mus.*).

202. **Dalpada confusa,** *Dist. Tr. E. S.* 1879, p. 121; *id. Sec. Yarkand Miss.* (Rhynch.) p. 3, f. 1 (1879).

Ochraceous, thickly punctured with dark bronzy-green; membrane pale fuliginous, the veins very dark and with an apical series of fuliginous spots; body beneath paler than above and thickly punctate on the lateral areas; *in the male* the disks of the second and third abdominal areas greyish; antennæ fuscous, the bases of the fourth and fifth joints luteous.

Antennæ with the third, fourth, and fifth joints almost subequal in length; head with the lateral lobes distinctly longer than the central; pronotal angles prominent, subacute, slightly directed backwards; rostrum just passing the posterior coxæ.

Length 15 to 17; breadth between pronotal angles 7 to 8 millim.

Hab. Punjab; Murree (*Stoliczka*).

Genus APODIPHUS.

Apodiphus, *Spin. Ess.* p. 295 (1837).
Apodiphya, *Amy. & Serv. Hém.* p. 108 (1843).

Type, *A. amygdali*, Germ. An Eastern European species.
Distribution. Palæarctic Region.

Body elongate; head broad and long, the apex subtruncate, the lateral margins unarmed, with the lateral lobes extending beyond the central lobe; antennæ with the basal joint not reaching the apex of the head, second joint twice as long as the first; pronotum with the anterior lateral margins finely denticulated, the lateral angles subprominent; scutellum long, narrowed towards the apex, which is rounded; abdomen centrally sulcate on basal area; rostrum with the third joint a little longer than the second.

This is really a Palæarctic genus. Three species have been described, one of which is found in Eastern Europe, another in Turkestan, whilst the third here enumerated from Kashmir is probably the species included in the Indian fauna as *A. amygdali* by Atkinson (J. A. S. Beng. lvii, p. 4, 1888) and said to occur in Assam.

203. **Apodiphus pilipes,** *Horv. Termész. Füzetek*, xii, p. 29 (1889).

Head, pronotum, and scutellum black, very coarsely punctate, with irregularly sized, raised levigate ochraceous spots; corium cinnamon-brown, finely and darkly punctate, with a few ochraceous levigate elevations; membrane cupreous; connexivum alternately ochraceous and olivaceous; head with a distinct central ochraceous line and with two small spots of the same colour at base; pronotum with a distinct transverse series of four ochraceous spots on anterior area; scutellum with three ochraceous spots at base:

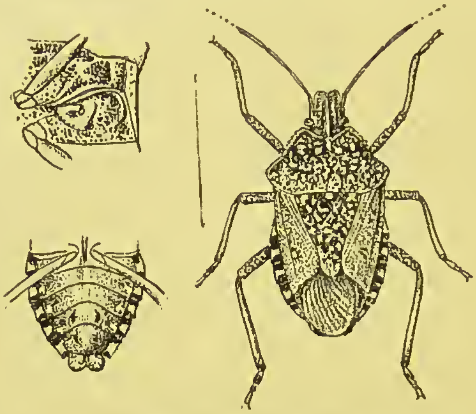

Fig. 60.—*Apodiphus pilipes.*

body beneath ochraceous, much punctured with dark olivaceous or black; abdomen with a central impunctate line, its lateral margins alternately ochraceous and olivaceous; legs piceous, bases of the femora ochraceous. Rostrum passing the posterior coxæ.

Length 17 to 17½; breadth between pronotal angles 8 millim.

Hab. Kashmir (*Budapest Mus.*). Gilgit (*Ind. Mus.*).

Genus SURENUS.

Surenus, *Dist. Tr. E. S.* 1901, p. 106.

Type, *S. normalis*, Dist.

Distribution. Burma.

Moderately ovate and elongate. Head long and somewhat broad, the lateral lobes much longer than the central lobe and broadly cleft between their apices, which are obliquely subtruncate, lateral margins concavely sinuate and reflexed; eyes prominent; antennæ hirsute, five-jointed, basal joint robust and reaching the apex of the head, second and fifth joints subequal in length; rostrum reaching the intermediate coxæ; pronotum about twice as broad between the lateral angles (which are subprominent) as long, the lateral margins dentate and moderately sinuate, the anterior angles subspinous, posterior margin very slightly rounded;

scutellum more than half the length of the abdomen, its apex narrowed and subacute; corium not quite reaching the margins of the connexivum, which is moderately angulated at the segmental incisures; apical margin of corium a little concavely sinuate, apical angle acutely produced; membrane with longitudinal veins; abdomen beneath globose; tibiæ sulcate but not dilated.

204. **Surenus normalis**, *Dist. Tr. E. S.* 1901, p. 107.

Head, pronotum, and scutellum piceous or very dark olivaceous, corium paler olivaceous, membrane dark cupreous, apex of scutellum narrowly ochraceous; abdomen beneath piceous, castaneous on disk; sternum and head beneath dark olivaceous; legs castaneous; antennæ castaneous, the apical joint stramineous. Head thickly and rather coarsely punctate; pronotum finely granulate, with an indistinct central impression; scutellum finely granulate and transversely wrinkled; corium thickly and finely punctate.

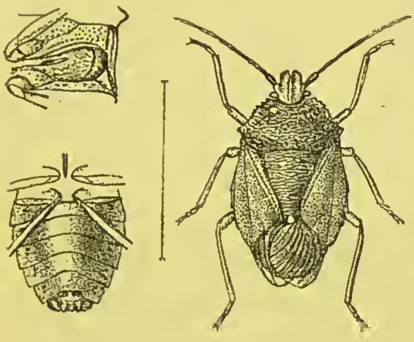

Fig. 61.—*Surenus normalis.*

Length 20; breadth between pronotal angles 11; max. abdominal breadth 12 millim.

Hab. Burma; Karennee (*Fea*).

Genus ERTHESINA.

Erthesina, *Spin. Ess.* p. 291 (1837).

Type, *E. fullo*, Thunb.

Distribution. Oriental Region.

In this genus both the anterior and posterior tibiæ are dilated, the head is long, somewhat tapering at apex, the basal joint of the antennæ does not nearly reach the apex of the head. These are the essential characters which separate *Erthesina* from the allied genera found in this fauna; another character which separates it from the following genus *Halys* is in having the basal joint of the rostrum extending beyond the bucculæ; the veins of the membrane are simple or somewhat furcate.

205. **Erthesina fullo**, *Thunb.* (Cimex) *Nov. Ins. Spec.* ii, p. 42, t. 2, f. 57 (1783); *Dall. List Hem.* i, p. 183 (1851).
Cimex mucoreus, *Fabr. Ent. Syst.* iv, p. 117 (1794); *Spin.* (Erthesina) *Ess.* p. 291 (1837).

Head black, coarsely punctate, a central longitudinal line,

lateral margins, inner margins of eyes, and ocelli ochraceous; antennæ piceous, base of apical joint ochraceous; pronotum and scutellum black, very coarsely punctate, with scattered small ochraceous callosities, the pronotum with a central line and lateral and anterior margins also ochraceous; corium purplish-brown, the marginal area somewhat darker, excepting the posterior disk, with scattered small ochraceous callosities; connexivum alternately ochraceous and piceous: body beneath pale ochraceous, with coarse scattered black punctures on the lateral areas; four longitudinal fasciæ to head beneath, sternal and abdominal incisures, scattered fasciæ and patches to sternum, transverse lines at abdominal stigmata, marginal spots and subapical spot to abdomen, black; legs black, bases of femora, centres of tibiæ, and bases of tarsi ochraceous. Second joint of antennæ distinctly longer than third; rostrum reaching the third abdominal segment.

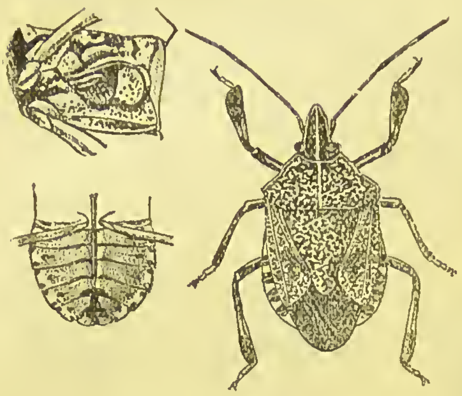

Fig. 62.—*Erthesina fullo.*

Length 20 to 25; breadth between pronotal angles 11 to 12 millim.

Hab. Sikhim (*Ind. Mus.*). Assam: Khási Hills (*Chennell*), Margherita, Darrang, Samagooting (*Ind. Mus.*). Bengal; Jessore (*Ind. Mus.*). Vizagapatam (*Ind. Mus.*). Trivandrum (*Triv. Mus.*). Ceylon (*Green*). Andaman Islands (*Ind. Mus.*).—Also received from China and Japan; Formosa and Hainan (*Coll. Dist.*).

206. **Erthesina acuminata,** *Dall. List Hem.* i, p. 183 (1851).

Closely allied to *E. fullo*, Thunb., but smaller; head more acuminate anteriorly; rostrum long, reaching the base of the last abdominal segment.

Length 20; breadth between pronotal angles 9 millim.

Hab. Sikhim (*Coll. Dist.*). North Bengal (*Brit. Mus.*). Burma (*Coll. Dist.*).

207. **Erthesina guttata,** *Fabr.* (Cimex) *Mant. Ins.* ii, p. 291 (1787); *Stål, Hem. Fabr.* i, p. 23 (1868).

Above olivaceous-green; head with a central line, the lateral margins, the inner margins of eyes, and two small spots at base ochraceous; pronotum, scutellum, and corium speckled with small ochraceous callosities; pronotum with the anterior and lateral margins and a central line extending about one-third from apex ochraceous;

scutellum with three small basal spots and the apex ochraceous; connexivum spotted with ochraceous: membrane piceous: body beneath and legs generally as in *E. fullo*. Rostrum reaching the fourth abdominal segment.

Length 20 to 25; breadth between pronotal angles 13 millim.

Hab. Ceylon (*Green*).

Genus HALYS.

Halys, *Fabr.* (part) *Syst. Rhyng.* p. 180 (1803).

Type, *H. dentatus*, Fabr.

Distribution. North and West Africa, India, China, and Japan.

Differing from *Erthesina* by the non-dilated tibiæ; head long, tapering in front, the central lobe as long as the lateral lobes or longer; first joint of the rostrum not extending beyond the bucculæ; veins of the membrane irregularly ramulose; abdomen profoundly sulcated.

208. **Halys dentatus**, *Fabr.* (Cimex) *Syst. Ent.* p. 702 (1775); *id. Syst. Rhyng.* p. 180 (1803).
Cimex sulcatus, *Thunb. Nov. Ins. Spec.* ii, p. 43 (1783).
Halys serrigera & serricollis, *Westw. in Hope Cat. Hem.* i, p. 23 (1837).

Dull ochraceous, coarsely and darkly punctate; head with the margins of the central lobe, pronotum with obscure oblique fasciæ, scutellum with short basal and obscure central discal fasciæ and two marginal spots before apex, and corium with some obscure discal patches, black; apex of scutellum pale, its apical margins piceous; connexivum alternately ochraceous and piceous; membrane greyish-brown, the veins darker: body beneath and legs ochraceous; head beneath and sternum coarsely and darkly punctate; abdomen finely and darkly punctate, its lateral margins spotted with piceous; legs finely spotted with piceous, more thickly at apices of femora and tibiæ; antennæ piceous, apices of second and third joints and base of fifth joint luteous. Antennæ with the second and fourth and the third and fifth joints subequal in length; rostrum extending to or across the fifth abdominal segment.

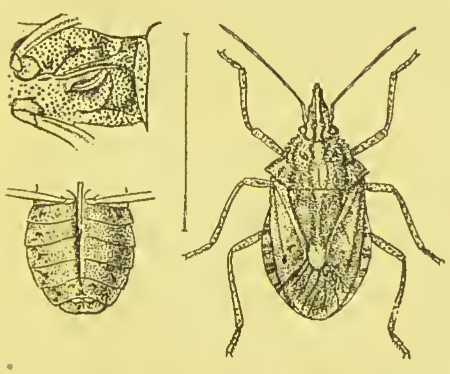

Fig. 63.—*Halys dentatus*.

Length 17 to 23; breadth between pronotal angles 8 to 10 millim.

Hab. North-western Provinces; Allahabad, Hardwar (*Ind. Mus.*). Sikhim (*Atkinson Coll.*); Mungphu (*Ind. Mus.*). Khási Hills (*Chennell*). Calcutta (*Ind. Mus.*). Bombay (*Leith*); Karachi (*Ind. Mus.*). Nilgiri Hills (*Hampson*); Bangalore (*Coll. Dist.*). Travancore; Trivandrum (*Triv. Mus.*). Ceylon (*Green*). Arrakan (*Ind. Mus.*).

Mr. R. M. Dixon, of the Victoria & Albert Mus. Bombay, informs me that the odour emitted by this species is different from the characteristic smell of bugs, though equally offensive.

Common in Western India, usually found on the Babul tree (*Acacia arabica*, Willd.), but also on the Casuarina tree (*Casuarina equisetifolia*, Forst.).

209. **Halys nilgiriensis**, *Dist. A. M. N. H.* (6) xi, p. 391 (1893).

Ochraceous, thickly punctured with brassy-black; head, anterior area and lateral angles of pronotum metallic green; antennæ black, the joints very narrowly ochraceous at base, fourth joint annulated with ochraceous near base (fifth joint mutilated); head with a spot at apex, an oblique spot on each side near eyes, and a reversely directed oblique spot on each side near base, ochraceous; legs castaneous, with the inner margins ochraceous; pronotum with the anterior and lateral margins ochraceous, and with a dull ochraceous spot on each green lateral angle; scutellum with five small ochraceous spots at base and the apex ochraceous; connexivum alternately ochraceous and black: body beneath and legs ochraceous, lateral margins of head and sternum broadly metallic green; femora and sublateral areas of abdomen darkly punctate; abdomen with small marginal spots at incisures and a spot on the last three abdominal segments black; tibiæ with outer spots at base, centre, and apex, and apices of the tarsi black.

Differing from *H. dentatus*, Fabr., apart from colour, by the much broader head, especially at the apex, with its lateral margins more strongly toothed; lateral margins of the pronotum more finely crenulate; apical third of scutellum more elongate and narrow; second joint of antennæ much shorter than the third, &c.

Length 20; breadth between pronotal angles 10 millim.

Hab. Nilgiri Hills (*Hampson*).

Genus AGÆUS.

Agæus, *Dall. List Hem.* i, p. 185 (1851).

Type, *A. tessellatus*, Dall.

Distribution. Oriental and Ethiopian Regions.

Head elongate, the lateral margins slightly sinuate but nearly parallel, the apex pointed, the central longer than the lateral lobes; antennæ five-jointed, basal joint not reaching the apex of the head; rostrum about reaching the fourth abdominal segment;

body elongate, ovate; pronotum with the lateral margins deeply sinuate, their edges reflexed and sometimes denticulate; scutellum elongate, posteriorly narrowed; membrane with longitudinal veins; abdomen beneath with a strong central furrow, reaching the fifth segment.

210. **Agæus tessellatus**, *Dall. List Hem.* i, p. 186 (1851).

Above testaceous, thickly punctured with brown; head streaked with brassy-green; pronotum with five brassy-green spots on each side of the posterior disk and two small central parallel spots of the same colour; scutellum with the basal area and two small spots before apex brassy-green, with a narrow central line, the basal angles, lateral margins, and an oblique angular line on each side testaceous; corium with a more or less defined brassy-green transverse patch about the centre, a very small spot near base, and two near apical margin; membrane brown: body beneath testaceous, sparingly and faintly punctate, a series of dark brown, sometimes green, spots near stigmata and a series of segmental spots on each side of furrow; sternum with scattered coarse punctures and some lateral segmental dark spots; legs testaceous, femora streaked with fuscous, and bases and apices of tibiæ also fuscous.

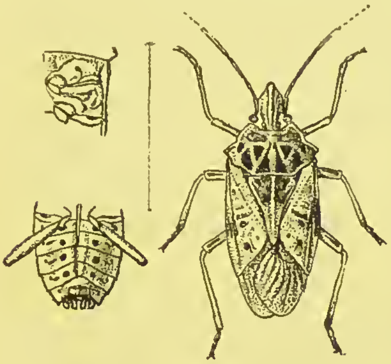

Fig. 64.—*Agæus tessellatus.*

Length 20; breadth between pronotal angles 9 millim.

Hab. Tenasserim; Myitta (*Doherty*).

211. **Agæus mimus**, *Dist. Tr. E. S.* 1887, p. 347, pl. 12, f. 1.

Greenish-black; head with a central line and the lateral margins ochraceous; pronotum with the margins and angulated fasciæ, enclosing thirteen spots, ochraceous; scutellum with a central line, lateral margins, apex, two spots before apex, a short oblique line at basal angles, and two faint oblique lines on disk ochraceous; corium with the claval, lateral, and apical margins, and some discal fasciæ ochraceous, these last enclose a marginal area and four irregularly shaped spots; membrane bronzy-brown: body beneath and legs similarly coloured and marked as in preceding species.

Length 23; breadth between pronotal angles 10 millim.

Hab. Assam (*Ind. Mus.*); Margherita (*Doherty*).

Genus NEVISANUS.

Nevisanus, *Dist. A. M. N. H.* (6) xi, p. 391 (1893).

Type, *N. alternans*, Westw.
Distribution. Oriental Region.

Head about as long as median portion of the pronotum, broad, the lateral margins moderately concavely sinuate, but not toothed, the anterior margin truncate, the lobes of equal length; antennæ five-jointed, inserted about halfway between the eyes and the apex, the second and third joints rather longly pilose, basal joint reaching the apex of the head, second and third joints subequal in length and a little shorter than fourth joint; rostrum slightly passing the posterior coxæ; body ovately elongate, depressed; pronotum with the anterior margin strongly concave, the lateral margins entire or dentate, sinuate near middle, the lateral angles subprominent; scutellum passing the centre of the abdomen, moderately tumid at base, and gradually narrowing to about one-fourth before apex, which is convexly rounded; membrane with robust longitudinal veins; abdomen beneath with a broad basal furrow; legs pilose; tibiæ sulcated.

212. **Nevisanus alternans,** *Westw.* (Halys) *in Hope Cat. Hem.* i, p. 22 (1837); *Dist. P. Z. S.* 1900, p. 809.
Nevisanus orientalis, *Dist. A. M. N. H.* (6) xi, p. 392 (1893).

Ochraceous, thickly punctured with brassy-black; head with the lateral lobes, the margins of the central lobe, and the base very thickly punctate; antennæ black, base of third joint narrowly, and bases of fourth and fifth joints broadly ochraceous; pronotum rugulose, thickly punctate, the extreme anterior and lateral margins ochraceous, the marginal lateral angles black; scutellum with a levigate spot at each basal angle and a small central basal spot ochraceous, apex and a central fascia from about centre very sparingly punctate; corium thickly punctate, particularly on disk and near base; membrane black, with some apical pale spots; connexivum alternately ochraceous and black: body beneath and legs ochraceous, lateral areas of sternum and abdomen sparingly punctate; longitudinal fasciæ to head, transverse fasciæ to sternum, abdominal segmental margins, duplex marginal spots at the incisures, and a

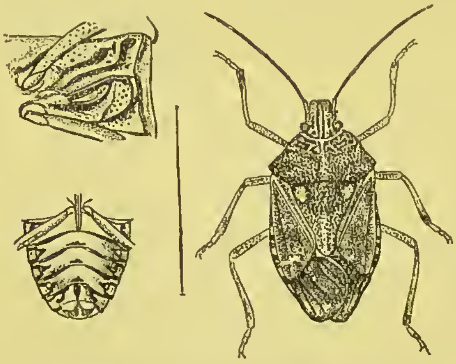

Fig. 65.—*Nevisanus alternans.*

transverse streak near stigmata, black; femora punctured with black: tibiæ outwardly black at base and apex; apices of tarsi black.

Length 18 to 20; breadth between pronotal angles 9 to 10 millim.
Hab. Sikhim. Khási Hills (*Chennell*).

213. **Nevisanus nagaensis,** *Dist. A. M. N. H.* (6) xi, p. 393 (1893).

Ochraceous; head, pronotum, and scutellum thickly covered with greenish-black punctures, the corium more sparingly so; pronotum with the lateral margins coarsely dentate, the lateral angles subacutely prominent; scutellum strongly transversely wrinkled at base and with three pale spots on basal margin; membrane cupreous, with the apex paler, the veins black, with subapical black spots between them; connexivum alternately ochraceous and greenish-black: body beneath as above, the punctures much more scarce on the disk of abdomen; legs ochraceous, spotted with black. *Antennæ mutilated* in type.

Length 20; breadth between pronotal angles 10 millim.
Hab. Nága Hills (*Doherty*).

214. **Nevisanus tectus,** *Walk.* (Dalpada) *Cat. Het.* i, p. 224, 17 (1867): *Dist. A. M. N. H.* (6) xi, p. 393 (1893).

Ochraceous, thickly, coarsely, and darkly punctate; head with a paler and less punctate space at base; margins of pronotal angles black; apex of scutellum pale ochraceous and almost impunctate: body beneath ochraceous; lateral areas of head and the sternum somewhat sparingly, coarsely, and darkly punctate; lateral areas of abdomen finely darkly punctate; legs ochraceous, finely speckled with castaneous. Pronotum and scutellum finely and obscurely wrinkled; pronotal lateral angles moderately prominent, broadly subacute, lateral anterior margins distinctly finely serrate.

This description is taken from the unique type from which the antennæ are now missing. Walker originally described them as "luteous, slender, black-speckled; first joint not extending to the front of the head, second shorter than third."

Length 14; breadth between pronotal angles 6½ millim.
Hab. Sylhet (*Brit. Mus.*).

Genus **ASYLA.**

Asyla, *Walk. Cat. Het.* ii, p. 403 (1867).

Type, *A. indicatrix*, Walk.
Distribution. Oriental Region.

Body moderately long and robust; head large, longer than broad, central lobe almost as long as the lateral lobes, which are rounded at their apices, with their lateral margins reflexed and concavely sinuate; antennæ with the basal joint not reaching the apex of head, second joint shorter than the third, remainder mutilated in type; rostrum extending to the third abdominal

segment, second joint just passing anterior coxæ, third joint reaching posterior coxæ; pronotum deflected anteriorly, anterior lateral margins finely serrate, lateral angles prominent; scutellum a little more than half the length of abdomen, narrowed posteriorly: abdomen somewhat obsoletely centrally sulcated, more distinctly so near base; prosternum sulcated, mesosternum centrally keeled, a small plate between the posterior coxæ; abdomen globose beneath; legs unarmed.

215. **Asyla indicatrix**, *Walk. Cat. Het.* ii, p. 403 (1867).

Brownish-ochraceous, thickly punctate; body beneath paler; head beneath and sternum punctate, abdomen with testaceous freckles; abdomen above pale castaneous, the connexivum brownish, spotted with ochraceous. Pronotum with the lateral angles prominently, broadly subacute; apex of scutellum impunctate.

Length 23; breadth between pronotal angles 12 millim.

Hab. "India" (*Brit. Mus.*).

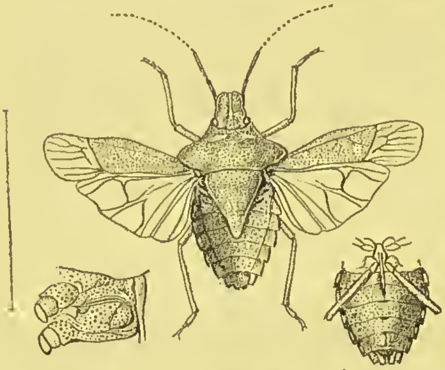

Fig. 66.—*Asyla indicatrix.*

216. **Asyla feæ**, *Dist. Tr. E. S.* 1901, p. 107.

Brownish-ochraceous; head, pronotum, and scutellum transversely rugulose and coarsely punctate; head with the central lobe more or less margined with black punctures; antennæ with the first, second, and third joints black (remaining joints mutilated); corium thickly and finely punctate, membrane fuscous; head beneath and sternum brownish-ochraceous; rostrum, legs, and abdomen testaceous. Head with the lateral margins slightly sinuate and moderately reflexed; antennæ with the second joint distinctly shorter than the third; pronotum with the lateral margins crenulate, the lateral angles moderately prominent, their apices broadly subacute; membrane with six longitudinal veins, asymmetrically bifurcate; abdomen obscurely centrally sulcate on the second and third segments; rostrum reaching the base of the third abdominal segment, its apex black.

Length 20; breadth between pronotal angles 9 millim.

Hab. Burma; Kakhyen Kauri (*Fea*).

Genus ORTHOSCHIZOPS.

Orthoschizops, *Spin. Gen. d'Ins. Artr.* p. 131 (*Mem. Mat. Fis. Soc. It. Modena,* xxv) (1852).

Type, *O. latispina*, Germ. An African species.

Distribution. Ethiopian and Oriental Regions.

Ovate; head with each lateral margin near the eyes armed

with a tooth or forming a more or less distinct angle, lateral lobes longer than the central lobe; rostrum extending to or passing the posterior coxæ; antennæ five-jointed, first joint not reaching the apex of head; pronotum with the lateral margins concavely sinuate and somewhat longly and irregularly dentate; scutellum subtriangular, its lateral margins more or less sinuate; membrane with the veins reticulated; sternum centrally sulcate; abdomen generally more or less centrally furrowed near base.

Fig. 67.
Orthoschizops assimilis.

217. **Orthoschizops assimilis**, *Westw.* (Halys) *in Hope Cat. Hem.* i, p. 21 (1837); *Dist. P. Z. S.* 1900, p. 809, pl. lii, f. 2.

Brownish-ochraceous, punctured and variegated with black; lateral margins of the pronotum serrated, the spines somewhat long and irregularly placed, pronotal lateral angles prominent; scutellum with the apex greyish; membrane with black reticulated veins; antennæ and legs brownish-ochraceous.

Length 18; breadth between pronotal angles 9½ millim.

Hab. "India" (*Oxford Mus.*).—The type is figured.

Division *SCIOCORARIA*.

This division represents a small group of allied genera separated sectionally by Stål (En. Hem. v, p. 49, 1876), to which Atkinson afterwards applied the name of Sciocoraria (J. A. S. B. lvii, p. 11, 1888). Head clypeated, not, or seldom, narrower than the base of the scutellum, foliaceously dilated, amplified before the collum; ocelli remote from the small eyes; antenniferous tubercles remote from the margins of the head, not distinguishable from above; basal joint of the antennæ not reaching the apex of the head; scutellum more or less narrowed from the base; connexivum flattened, laminated.

Synopsis of Genera.

a. Scutellum somewhat sharply narrowed to apex. SCIOCORIS, p. 125.
b. Scutellum broad, more evenly attenuated posteriorly .... MENEDEMUS, p. 127.

Genus **SCIOCORIS**.

Sciocoris, *Fallén, Hem. Suec.* p. 20 (1829).

Type, *S. terreus*, Schrank. A Palæarctic species.

Distribution. Palæarctic, Ethiopian, and Oriental Regions.

Body oval, depressed, slightly convex beneath; head large, flattened, rounded in front, the lateral lobes a little the longest

and meeting just in front of the central lobe, the margins laminate; rostrum about reaching the posterior coxæ; pronotum with the lateral margins laminate and with a more or less distinct transverse discal impression; scutellum gradually narrowed posteriorly, margins very slightly sinuate; membrane with the veins simple; pro- and mesosterna furrowed.

218. **Sciocoris indicus**, *Dall. List Hem.* i, p. 132 (1851).

Pale ochraceous, thickly, coarsely, darkly punctate; head with two distinct short striæ on disk, and a similar striation at base a little before each eye; antennæ with the first and second joints ochraceous, the remainder piceous; pronotum with a central levigate line extending through the scutellum; apex of scutellum pale greyish-ochraceous; connexivum ochraceous, spotted with piceous; membrane fuliginous, hyaline; body beneath punctured as above, but a little paler in hue; sternum with a narrow pale fascia on each lateral area; abdomen with the disk piceous, gradually narrowing towards apex, where it contains a central pale line, and with a subapical black spot; an indistinct pale submarginal fascia on each side.

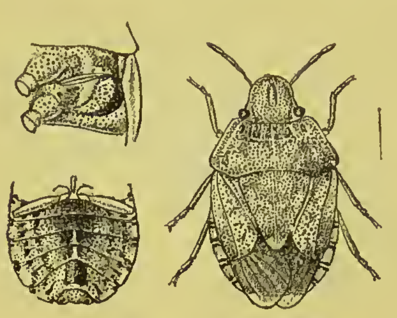

Fig. 68.—*Sciocoris indicus.*

Length $5\frac{1}{2}$ to 6 millim.

Hab. North India (*Brit. Mus.*). Malabar (*Coll. Dist.*). Coonoor (*Brit. Mus.*).

219. **Sciocoris lateralis**, *Fieb. Rhynch.* p. 21 (1851).

This species differs from *S. indicus*, Dall., by the following characters:—the antennæ are brownish-yellow, third joint brown above, fourth yellowish at the base, above brown like the entire fifth joint; on the slightly curved margins of the pronotum is a longitudinal three-cornered whitish spot, the posterior corner of which almost reaches the humeral angles, the inner corner resting on the transverse furrow.

Length $4\frac{1}{4}$ millim.

Hab. India ("Aus Hinterindien"—*Fieber*). Coonoor (*Brit. Mus.*).

220. **Sciocoris lewisi**, *Dist.* (Menedemus) *A. M. N. H.* (7) iv, p. 429 (1899).

Ochraceous, thickly covered with blackish punctures; head with the narrow lateral margins and three discal, linear, levigate

fasciæ ochraceous; pronotum with three similar fasciæ, the central one straight, the two outermost oblique; scutellum with a small spot near each basal angle and a central levigate longitudinal fascia ochraceous, extreme basal angles subfoveate and piceous; corium with the base of lateral margins ochraceous; membrane piceous; connexivum alternately ochraceous and piceous: body beneath piceous; sternum with sublateral ochraceous linear spots; lateral margins of abdomen broadly dark ochraceous, extreme margin spotted with pale ochraceous; legs pale brownish; antennæ with the third, fourth, and fifth joints piceous, first and third joints shortest and subequal in length, fourth joint slightly longer than fifth.

Length $5\frac{1}{2}$ millim.

Hab. North Khási Hills (*Chennell*). Ceylon (*Lewis*).

Genus MENEDEMUS.

Menedemus, *Dist. A. M. N. H.* (7) iv, p. 429 (1899).

Type, *M. vittatus*, Dall. A species of doubtful habitat, supposed to have been received from Africa.

Distribution. Ethiopian ? and Oriental Regions.

Allied to *Sciocoris*, but with the head a little longer and with its lateral margins distinctly reflexed; scutellum broader, more evenly attenuate posteriorly. Besides these structural characters, *Menedemus*, according to present knowledge, also differs from *Sciocoris* in possessing a distinct and ornamental coloration of a generally fasciate character.

221. **Menedemus hieroglyphicus**, *Dist. A. M. N. H.* (7) iv, p. 430 (1899).

Brownish-ochraceous, thickly and darkly punctate; head with three discal levigate, linear, ochraceous fasciæ, the central one straight, the others slightly curved; pronotum with five similar fasciæ, and between the two outermost on each side a short basal fascia, and the lateral margins ochraceous; scutellum with an elongate spot near each basal angle, the lateral and apical margins, a central longitudinal fascia, and a transverse central sinuate fascia crossing disk levigate, ochraceous; extreme basal angles subfoveate and piceous; corium narrowly ochraceous at base of lateral margin, with a sublateral linear ochraceous fascia

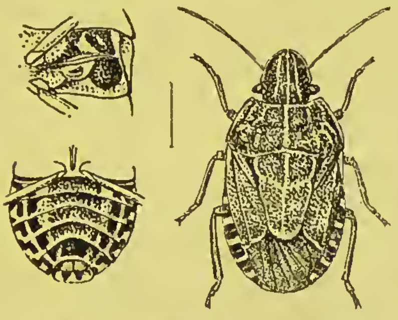

Fig. 69.—*Menedemus hieroglyphicus.*

and some testaceous discal markings; membrane piceous; connexivum alternately ochraceous and black: body beneath piceous: sternum with a sublateral ochraceous levigate fascia on each side; abdomen with the posterior segmental margins, a central and two discal longitudinal fasciæ on each side, and a series of marginal spots ochraceous: antennæ dull dark brownish, first and third and fourth and fifth joints subequal in length.

Length 7 to 8 millim.

Hab. Bombay (*Leith*).

Division *DORPIARIA.*

The group of genera proposed to be included in this division is distinguished by the following characters:—Lateral margins of the head and pronotum generally laminated, those of the pronotum entire or finely crenulate; head broad, generally about as broad at base as long, not prominently attenuated anteriorly, lateral lobes longer than the central lobe; first joint of the antennæ not reaching the apex of the head; sternum usually more or less furrowed; abdomen without a furrow and unarmed at base; anterior margin of the pronotum wider than the region of the eyes and truncate behind them, the anterior angles always more or less acute.

This division will include that of Stål (En. Hem. v, p. 52, 1876), subsequently named *Myrocharia* by Atkinson (J. A. S. B. lvii, p. 12, 1888), but is more extensive and includes genera dispersed in other divisions by those authors.

Synopsis of Genera.

A. Lateral margins of pronotum entire, not crenulate.
- a. Anterior angles of the pronotum forwardly produced .... DORPIUS, p. 129.
- b. Anterior angles of pronotum not forwardly produced.
  - *a.* Scutellum broad, about two-thirds the length of abdomen .... ÆDNUS, p. 132.
  - *b.* Scutellum more or less gradually attenuated to apex.
    - *a*[1]. Head scarcely sinuate and not angulate in front of eyes.
      - *a*[2]. Antenniferous tubercles with a small spine at base .... LAPRIUS, p. 129.
      - *b*[2]. Antenniferous tubercles unarmed.
        - *a*[3]. Pronotum behind head truncate .... NEODIUS, p. 131.
        - *b*[3]. Pronotum behind head concave .... HIPPOTA, p. 131.
    - *b*[1]. Head distinctly angulated and sinuate in front of eyes .... PRÆTEXTATUS, p. 134.

B. Lateral margins of pronotum finely crenulate. VALESCUS, p. 134.

Genus DORPIUS.

Dorpius, *Dist. Tr. E. S.* 1900, p. 164.

Type, *D. typicus*, Dist., an African species received from the Congo.

Distribution. Ethiopian and Oriental Regions.

Body elongate, subovate, moderately convex beneath; head ovate, lateral margins laminate, slightly recurved upwardly, lateral lobes a little longer than the central; rostrum reaching the intermediate coxæ; antennæ five-jointed, the third joint very short, basal joint not reaching the apex of the head. Pronotum with the lateral margins convexly laminate, slightly recurved upwardly, anterior margin much wider than head, its apical angles acute and forwardly produced. Scutellum more than half the length of abdomen, attenuated posteriorly; membrane with longitudinal veins; anterior femora spined beneath; meso- and metasterna centrally furrowed.

222. **Dorpius indicus**, *Dist. Tr. E. S.* 1900, p. 165, pl. ii, f. 4.

Ochraceous, finely and thickly punctate; five transverse spots on anterior disk of pronotum, a spot at each basal angle and a central fascia to scutellum impunctate; antennæ with the first, second, and third joints ochraceous, apex of the third and the whole of the fourth and fifth joints, excluding their extreme apices, fuscous: body beneath with a broad sublateral series of brown punctures, on the inner side of which is a segmental series of pale levigate spots; stigmata piceous; membrane pale fuscous, its apical margin greyish; sternum coarsely punctate; femora finely speckled with brownish.

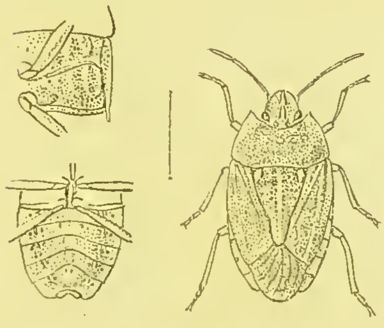

Fig. 70.—*Dorpius indicus.*

Length 10; breadth between pronotal angles 5 millim.

Hab. Sind (*Coll. Dist.*). Punjab (*Harford, Brit. Mus.*).

Genus LAPRIUS.

Laprius, *Stål, Öfv. Vet.-Ak. Förh.* 1861, p. 200.

Type, *L. gastricus*, Thunb., from Japan and China.

Distribution. Oriental and Eastern Palæarctic Regions.

Head somewhat narrowed in front, subovate, almost as long as the pronotum, lateral margins moderately reflexed and laminate, a little sinuate in front of eyes, lateral lobes a little longer than the central lobe, but entirely separate at their apices; a small spine

at apex of antenniferous tubercles; antennæ five-jointed, first joint not reaching apex of head; rostrum extending beyond the intermediate coxæ. Pronotum with the anterior lateral margins entire, anterior angles subprominent and reaching beyond the latitude of the eyes; pro- and mesosterna furrowed.

223. **Laprius varicornis.**

Sciocoris varicornis, *Dall. List Hem.* i, p. 136 (1851).

Laprius varicornis, *Stål Öfv. Vet.-Ak. Förh.* p. 623 (1870).

Dull ochraceous, thickly and darkly punctate; eyes black; a transverse row of four obscure levigate spots on anterior disk of pronotum; a levigate spot at basal angles, and a very obscure paler central fascia to scutellum; head beneath and sternum as above, but the punctures less dense; abdomen more or less castaneous, its lateral margins paler with the stigmata piceous, preceded by a segmental series of short whitish spots; legs and rostrum pale ochraceous, the femora speckled with brownish, apex of rostrum piceous; antennæ with the three basal joints reddish-ochraceous, apex of third joint infuscated, fourth and fifth joints fuscous with their bases ochraceous.

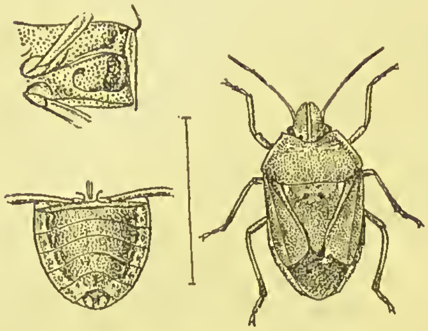

Fig. 71.—*Laprius varicornis.*

In some specimens there are a few dark spots on basal area of scutellum, as in the specimen figured.

Length 11 to 12; breadth between pronotal angles 6 millim.

Hab. Sind (*Coll. Dist.*). Khási Hills (*Chennell*). Cochin and Calcutta (*Coll. Dist.*). Bombay (*Leith*).

224. **Laprius antennatus,** *Dist. Tr. E. S.* 1901, p. 108.

Allied to the preceding species (*L. varicornis*), but differing by the colour of the antennæ, which in *L. antennatus* are fuscous, the basal joint somewhat testaceous, bases of third and fourth joints luteous; the body is much broader posteriorly and more rugulose on the pronotum and scutellum, the punctures much coarser; the pale ante-stigmatal spots larger, more elongate and somewhat continuous.

Length 12; breadth between pronotal angles 6 millim.

Hab. Burma: Karen, Ashwe Keba (*Fea*) *.

* Mr. Atkinson (J. A. S. B. 1888, p. 14) has included *L. gastricus*, Thunb., in his enumeration of Indian Rhynchota as being "Reported from India." In this course he has probably been misled by Walker. *L. gastricus* appears to represent the genus in China and Japan.

Genus NEODIUS.

Odius, *Stål*, *Öfv. Vet.-Ak. Förh.* 1867, p. 505 (*nom. præocc.*).
Neodius, *Bergr. Rev. d'Ent.* x, p. 214 (1891).

Type, *N. depressus*, Ellenr., a species received from Sumatra and Borneo.

Distribution. Burma and the Malayan Archipelago.

Head somewhat narrowed in front, subovate, shorter than the pronotum, lateral margins moderately reflexed and laminate, a little sinuate in front of eyes, lateral lobes a little longer than the central lobe, separate at their apices, antenniferous tubercles not spinous; antennæ five-jointed, first joint not reaching apex of head; rostrum reaching the intermediate coxæ. Pronotum with the anterior lateral margins entire, but moderately laminate and reflexed; anterior angles subprominent and extending forward beyond the eyes; mesosternum with an obscure central furrow.

225. **Neodius obscurus**, *Dist.* (Odius) *Tr. E. S.* 1901, p. 108.

Dull ochraceous, thickly covered with coarse black punctures; antennæ fuscous, the base of the apical joint luteous; abdomen above fuscous-violaceous, connexivum thickly and blackly punctate; membrane smoky-hyaline, the longitudinal veins fuscous; body beneath piceous; legs ochraceous, coarsely punctate. Head cleft at apex between the apices of the lateral lobes; antennæ with the second joint a little shorter than the third, fourth joint slightly longest; pronotum with the lateral margins strongly recurved, and with a faint central longitudinal line which is continued throughout the scutellum.

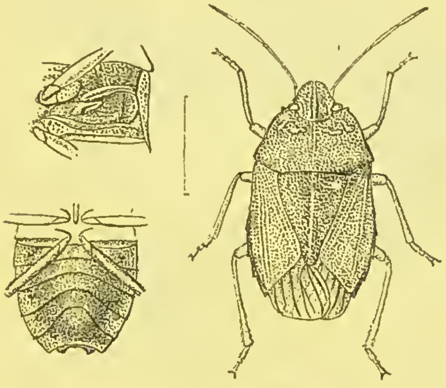

Fig. 72.—*Neodius obscurus.*

Length 12; breadth between pronotal angles 6 millim.

Hab. Burma; Katha, Teinzo (*Fea*).

Genus HIPPOTA.

Plexippus, *Stål*, *Öfv. Vet.-Ak. Förh.* 1867, p. 505 (*nom. præocc.*).
Hippota, *Bergr. Rev. d'Ent.* x, p. 214 (1891).

Type, *H. dorsalis*, Stål.

Distribution. At present known only from India.

Head short, broad, almost shorter than broad between the eyes rounded at apex; lateral lobes slightly longer than the central, with their margins moderately reflexed; first joint of the antennæ

about reaching the apex of head. Rostrum not extending beyond the intermediate coxæ. Pronotum with the lateral margins rounded and laminate, anterior angles obtusely angulated beyond the outer margin of the eyes; corium with the apical angles a little produced, apical margin somewhat sinuate near the angle; veins of membrane simple. Abdomen not spined at base, but second segment slightly convexly elevated at centre; mesosternum centrally carinate.

226. **Hippota dorsalis**, *Stål* (Plexippus), *Berl. ent. Zeitschr.* xiii, p. 226 (1869).

Brownish-ochraceous, thickly darkly punctate, bases of pronotum and scutellum finely transversely rugulose; abdomen above dark violaceous; connexivum blackish, last two segments obsoletely palely streaked; an impunctate spot at base of eyes; extreme lateral margins of pronotum and the extreme lateral margin of corium near base blackish; pronotum punctate, mesosternum punctate near coxæ; stigmata darkly prominent.

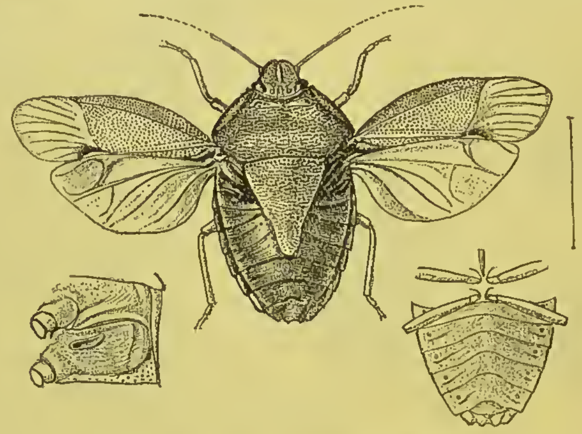

Fig. 73.—*Hippota dorsalis.*

Length 15; breadth between pronotal angles 8 millim.

Hab. Deccan (*Stockholm Mus.*).

I am indebted to Dr. Aurivillius for an opportunity of examining and figuring this apparently rare insect.

Genus ÆDNUS.

Ædnus, *Dall. List Hem.* i, p. 144 (1851).

Type, *Æ. obscurus*, Dall.

Distribution. Oriental and Eastern Palæarctic Regions.

Body ovate; head rather short, margins moderately reflexed and laminate; the lateral lobes a little longer than the central lobe, but not always meeting in front as described by Dallas; antennæ five-jointed, basal joint not quite reaching the apex of the head;

rostrum reaching or slightly passing the intermediate coxæ. Pronotum with the anterior margin broad, produced truncately beyond the eyes, the anterior angles subacute, lateral margins oblique and sublaminately reflexed. Scutellum broad, about two-thirds of the length of the abdomen, becoming narrower from about the base to the middle and then regularly continued to the apex which is rounded; membrane with longitudinal veins, which become somewhat reticulated near apical margin; femora beneath with a double series of minute spines or tubercles towards their apices.

227. **Ædnus obscurus**, *Dall. List Hem.* i, p. 145, t. 3, f. 5 (1851).
Ædnus similis, *Hagl. Stett. ent. Zeit.* xxix, p. 154 (1868).

Above piceous or very darkly castaneous; body beneath black; a narrow lateral margin to meso- and metasterna, and a broad lateral margin to abdomen brownish-ochraceous; legs castaneous, tarsi and rostrum ochraceous; antennæ with the first four joints piceous, very narrowly ochraceous at base, fifth joint ochraceous with its base piceous; membrane pale brownish, with the veins piceous: body above very thickly punctate, more or less rugulose on pronotum and scutellum; beneath, the abdomen is more finely punctate than the sternum.

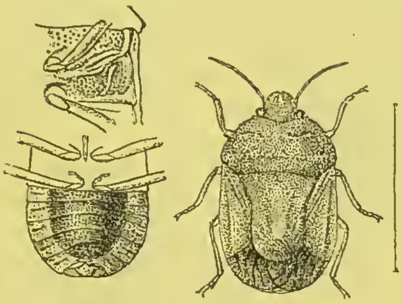

Fig. 74.—*Ædnus obscurus.*

Length $8\frac{1}{2}$ to $10\frac{1}{2}$; breadth between pronotal angles 5 to 6 millim.

Hab. Nága Hills (*Chennell*). Burma: Bhamo, Palon (*Fea*).—Also received from the Malay Peninsula, and from a number of the islands comprised in the Malayan Archipelago.

228. **Ædnus ventralis**, *Dall. Tr. E. S.* (n. s.) ii, p. 10, pl. i, f. 3 (1852).

Ovate, rather convex, ochraceous, thickly punctured with dark brown; scutellum with an obscure central pale fascia on disk; membrane pale hyaline, with the veins darker; sternum and legs ochraceous, the first somewhat sparsely darkly punctate; abdomen black or castaneous, the margins broadly ochraceous, the extreme margin palest and with a small dark spot at the apex of each segmental incisure; legs speckled with brownish; rostrum ochraceous; antennæ brownish-ochraceous, the fourth and fifth joints darkest. On the anterior disk of the pronotum there is a transverse series of four or five small levigate pale spots, and there is a similar pale spot in each basal angle of the scutellum; abdomen beneath thickly and finely punctate.

Length 6 to $7\frac{1}{2}$; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.

Hab. Sikhim (*Atkinson*). Nága Hills (*Chennell*). Dallas's typical specimen was from Hong Kong.

Genus PRÆTEXTATUS.

Prætextatus, *Dist. Tr. E. S.* 1901, p. 583.

Type, *P. typicus*, Dist.
Distribution. Burma.

Body ovate; head with the lateral margins laminate, angulate in front of eyes and then distinctly sinuate, the lateral lobes longer than the central lobe, but not quite meeting at their apices; eyes prominent; antennæ five-jointed, basal joint not reaching the apex of the head. Pronotum with the lateral margins oblique, laminate, slightly but distinctly recurved, the anterior angles prominent, anterior margin sinuated for the reception of the head, lateral angles subprominent. Scutellum shorter than the corium, gradually attenuated to apex, which is narrow and obtusely acute; membrane with longitudinal veins, some furcate but not reticulate; rostrum reaching the intermediate coxæ, first joint not quite reaching base of head; meso- and metasterna somewhat obscurely furrowed.

229. **Prætextatus typicus**, *Dist. Tr. E. S.* 1901, p. 584.

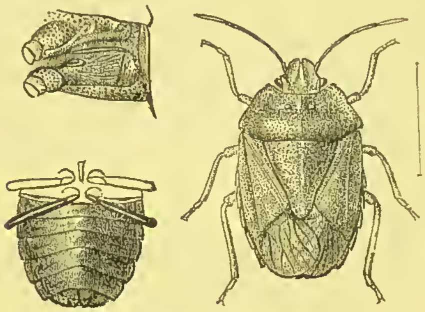

Fig. 75.—*Prætextatus typicus.*

Blackish-castaneous, the corium a little paler in hue; membrane fuliginous; antennæ piceous, the apical joint stramineous; body beneath black; legs and rostrum dark castaneous; pronotum with two small central pale spots on anterior disk; antennæ with the fourth joint longest, second shorter than third; upper surface thickly punctate, scutellum transversely wrinkled.

Length 13; breadth between pronotal angles 7 millim.
Hab. Burma (*Coll. Dist.*).

Genus VALESCUS.

Valescus, *Dist. Tr. E. S.* 1901, p. 584.

Type, *V. nigricans*, Dist.
Distribution. Ceylon.

Somewhat broadly ovate; head with the lateral margins reflexed, moderately laminate, angulate in front of eyes, the lateral lobes longer than the central and cleft at their apices; eyes large and prominent; antennæ five-jointed, basal joint not reaching the apex of the head. Pronotum with the anterior angles broadly truncate

and acutely angulate at their apices; lateral margins oblique, moderately laminate and very finely crenulate, lateral angles subprominent; posterior margin nearly straight; anterior margin excavated for the reception of the head, behind which it is truncate. Scutellum more than half the length of the abdomen and narrowed before apex which is rounded; membrane not quite reaching apex of abdomen, with longitudinal veins; rostrum reaching the intermediate coxæ, basal joint almost extending to base of head; meso- and metasterna somewhat obscurely furrowed; antennæ, tibiæ, and tarsi distinctly pilose.

230. **Valescus nigricans**, *Dist. Tr. E. S.* 1901, p. 585.

Very dark reddish-castaneous; antennæ, rostrum, coxæ, and legs dark ochraceous; fifth joint stramineous, its extreme apex piceous. Antennæ pilose, second joint a little shorter than third, fourth, or fifth joints, which are subequal in length; head coarsely punctate, with a small impunctate spot before each eye; pronotum transversely wrinkled, thickly punctate on the anterior and lateral margins, rugulose on posterior area; scutellum transversely wrinkled, obscurely finely punctate on apical area; corium thickly punctate; sternum coarsely punctate; abdomen very finely and obscurely punctate.

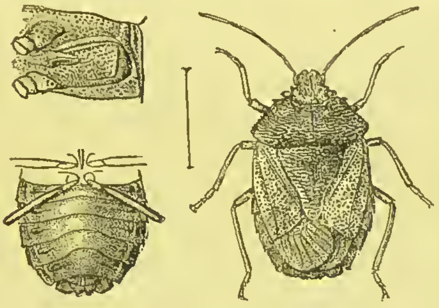

Fig. 76.—*Valescus nigricans.*

Length 12; breadth between pronotal angles 7 millim.

Hab. Ceylon (*Lewis*).

Division *DYMANTARIA* *.

This division includes a group of genera separated by Stål (En. Hem. v, p. 51, 1876) and some others placed by him in another category. The following characters represent the division as understood and proposed here:—The antenniferous tubercles are remote from the lateral margins of the head, and inside longitudinal lines through the inner margins of the eyes; the head is always elongate, sometimes longer than broad; the sternum is usually sulcated; and the odoriferous apertures are often, to use a term of Stål's, "subauriculatæ."

* The genus *Dymantis*, on which the divisional term is constructed, is African.

Synopsis of Genera.

A. Head rounded anteriorly .... BONACIALUS, p. 136.
B. Head more or less acuminate.
  a. Head with the lateral lobes longer than the central and meeting beyond it...... GULIELMUS, p. 137.
  b. Head with the lobes about equal in length.
    a'. Antennæ sexually diverse............ ÆLIOMORPHA, p. 138.
    b'. Antennæ five-jointed, alike in both sexes .... ADRIA, p. 139.

Genus **BONACIALUS**.

Bonacialus, *Dist. Entomologist,* 1901, p. 346.

Type, *B. dixoni,* Dist.
Distribution. Western India.

Body elongate; head large, longer than broad, somewhat broadly rounded in front, distinctly depressed before apex, the lateral margins a little ampliated and recurved, the lateral lobes longer than the central lobe and meeting beyond it, but a little cleft at their apices; the antenniferous tubercles remote from the lateral margins and distinctly inside longitudinal lines passing through the eyes; antennæ five-jointed, first joint short, incrassated, second joint not reaching apex of head, third shortest; rostrum reaching the posterior coxæ; eyes touching the anterior angles of the pronotum, which is broader than long, its lateral margins a little sinuate, lateral angles rounded; scutellum more than half the length of abdomen, narrowed towards apex; corium with the lateral margins almost perpendicular.

231. **Bonacialus dixoni,** *Dist. Entomologist,* 1901, p. 347.

Ochraceous, very coarsely and darkly punctate; head with the central lobe and base more or less levigate; pronotum with the margins narrowly levigate, the lateral areas more thickly and the

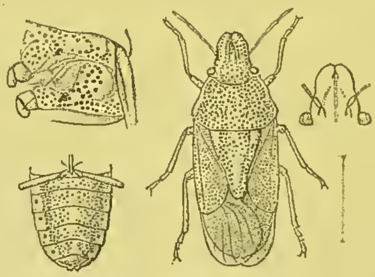

Fig. 77.—*Bonacialus dixoni.*

central area much less punctate; scutellum with a large levigate spot near each basal angle, and a central levigate fascia not quite

reaching apex: corium thickly punctate, with its lateral margins very narrowly levigate; membrane pale hyaline; body beneath as above, the legs impunctate; a small black spot at bases of coxæ, a similar spot near apices of femora beneath, and the stigmata black; lateral areas of the abdomen less punctate than on disk; antennæ darker ochraceous; apex of rostrum piceous.

Length 11; breadth between pronotal angles 4½ millim.

Hab. Bombay; Bor Ghat (*Dixon*).

Genus GULIELMUS.

Gulielmus, *Dist. Entomologist,* 1901, p. 347.

Type, *G. laterarius*, Dist.

Distribution. Western India.

Body elongate; head large, longer than broad, narrowing to apex which is subacute, distinctly depressed before apex, lateral lobes much longer than central lobe and meeting beyond it, their apices slightly cleft; antenniferous tubercles remote from the lateral margins, distinctly within longitudinal lines through the eyes; antennæ five-jointed, basal joint incrassated, second joint not reaching apex of head, fourth joint a little shortened; rostrum about reaching posterior coxæ; pronotum broader than long, lateral margins obliquely straight, lateral angles rounded; scutellum long, broad, little narrower at its apical half, extending to or reaching a little beyond the apical angles of the corium; connexivum exposed.

232. **Gulielmus laterarius**, *Dist. Entomologist,* 1901, p. 347.

Ochraceous, thickly and darkly punctate; corium tinged with carmine-red; extreme margins of head and a small spot at apex of scutellum black; two small obscure fuscous spots on anterior area of pronotum; scutellum with an elongate levigate spot outwardly

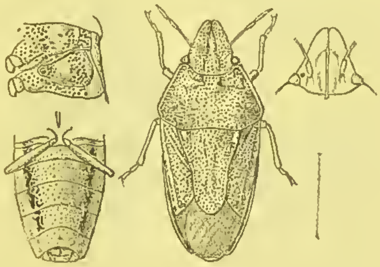

Fig. 78.—*Gulielmus laterarius.*

margined with black at each basal angle and a central levigate line; corium with the outer margin and veins ochraceous; membrane pale greyish; inner margin of connexivum piceous; body beneath ochraceous; head and sternum somewhat thickly, abdomen more sparingly punctate, a longitudinal black punctate fascia on

each lateral area of the abdomen; apex of rostrum and apical joint of antennæ (excluding base) fuscous.

Length 9 to 10; breadth between pronotal angles 3½ to 4 millim.

Hab. Bombay; Bor Ghat: and Western India generally.

Mr. R. M. Dixon, who forwarded to me this and the following species, describes them as nocturnal in habit, and very much attracted by brilliant light. They are sparingly found in September, but are plentiful in October and November all over Western India.

233. **Gulielmus marmoratus**, *Dist. Entomologist*, 1901, p. 347.

Closely allied to the preceding species, but differing in having the surface of the pronotum and scutellum distinctly rugulose; the scutellum is also broader, the corium concolorous, and the punctures more profound.

Length 8½ to 9; breadth between pronotal angles 3½ millim.

Hab. Bombay; Bor Ghat: and Western India generally.

Genus ÆLIOMORPHA.

Tetratoma, *Sign. Ann. Soc. Ent. Fr.* 1851, p. 339 (*nom. præocc.*).
Æliomorpha, *Stål, Öfv. Vet.-Ak. Förh.* 1858, p. 313; *id. Hem. Afr.* i, p. 173 (1864).

Type, *Æ. simulans*, Stål, an African species.

Distribution. Ethiopian and Western Oriental Regions.

Body moderately elongate, subovate; head large, not longer than broad at base, narrowing to apex, but not depressed before it, central lobe prominent, reaching apex of head; antenniferous tubercles remote from the lateral margins, distinctly within longitudinal lines through the eyes; antennæ sexually diverse, second

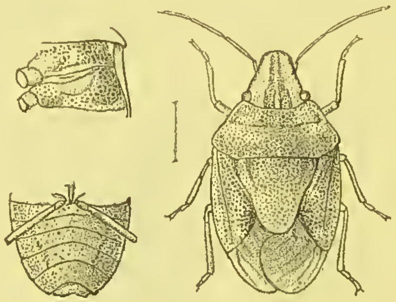

Fig. 79.—*Æliomorpha lineaticollis.*

joint in male very short, subobsolete, in the female slender and elongate, first joint slender, incrassate, not reaching apex of head; rostrum about reaching posterior coxæ; pronotum broader than long, lateral margins obliquely straight, base slightly gibbous, depressed anteriorly; scutellum somewhat long, moderately broad,

narrowed at its posterior half, not reaching the apical angles of the corium.

234. **Æliomorpha lineaticollis**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 36 (1837).

Ochraceous, thickly and somewhat darkly punctate; lateral areas of head and lateral margins of pronotum bright ochraceous, extreme margins of head brownish; scutellum with a very small pale spot near each basal angle; corium with a distinct castaneous patch on the inner half of apical margin; membrane very pale brownish; body beneath and legs ochraceous; lateral areas of head, sternum, and abdomen somewhat thickly punctate; disk very sparingly punctate; antennæ ochraceous, moderately pilose.

Length 6 to 7 millim.

Hab. Bengal (*Oxford Museum*). Bombay; Bor Ghat (*Dixon*).

Genus ADRIA.

Adria, *Stål, En. Hem.* v, p. 58 (1876).

Type, *A. parvula*, Dall.

Distribution. Oriental Region, and reported from Senegal.

Body elongate; length of head moderate, less than its breadth between the eyes, lobes about equal in length; antenniferous tubercles remote from lateral margins, just within longitudinal lines through the eyes; antennæ five-jointed, first joint short, incrassate, fourth shorter than fifth, which is distinctly broadened; rostrum reaching posterior coxæ; pronotum broader than long, lateral margins oblique, anterior angles slightly prominent; scutellum moderately long, not quite reaching apex of corium; sternum sulcated.

235. **Adria parvula**, *Dall.* (Pentatoma) *List Hem.* i, p. 246 (1851).

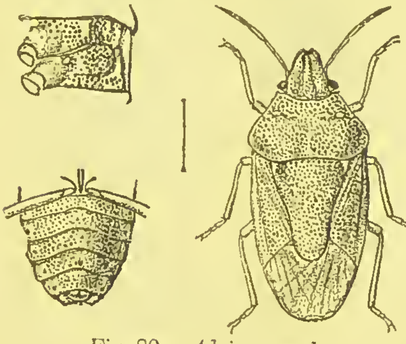

Fig. 80.—*Adria parvula.*

Ochraceous, somewhat thickly and coarsely punctate; anterior and lateral margins and some anterior transverse discal markings to pronotum levigate; scutellum with a spot near each basal angle and a central indistinct longitudinal line levigate, and usually with a small obscure darker spot at apex; body beneath more darkly punctate on the lateral areas; antennæ with the fourth and fifth joints piceous.

Length 7 to 8 millim.

Hab. Bengal; Ranchi (*Ind. Mus.*). Bombay; Khandála.

Burma; Minhla (*Comotto*).—This species has also been reported from Senegal.

Flies by night, particularly about brilliant lights. Common at Khandála (*R. M. Dixon*).

Division *MECIDARIA*.

This division here includes two genera differing from the previous division (*Dymantaria*) by having the antenniferous tubercles placed more or less in line with the inner margins of the eyes and not inside them. The body is elongate, the width of the pronotum being less, or much less, than half the length of the body.

Synopsis of Genera.

A. Head narrow, acuminate. .... MECIDEA, p. 140.
B. Head moderately broad, rounded in front........ ÆNARIA, p. 141.

Genus **MECIDEA**.

Mecidea, *Dall. List Hem.* i, p. 139 (1851).
Ceratauláx, *Sign. Ann. Soc. Ent. Fr.* 1851, p. 335.

Type, *M. indica*, Dall.

Distribution. Nearctic, Neotropical, Eastern and Southern Palæarctic Regions, South Africa, and India.

Body elongate, somewhat depressed; head somewhat long and convex, the lateral lobes much longer than the central lobe and generally meeting beyond it; antenniferous tubercles entirely visible from above; eyes globose, touching the anterior margin of the pronotum; ocelli large, on a line with the base of the eyes; antennæ five-jointed, basal joint not reaching the apex of the head, second joint as long as the others or longer; rostrum extending to the metasternum, inserted towards the apex of the head; scutellum long, triangular, much narrowed at the apex; membrane with simple longitudinal veins; mesosternum with a central furrow; legs moderate, femora unarmed.

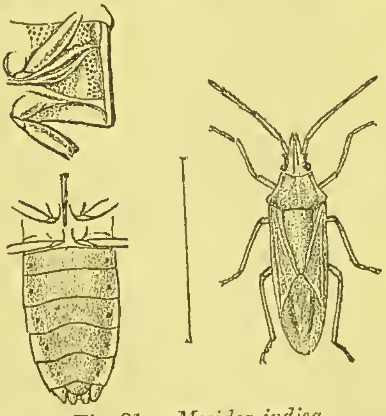

Fig. 81.—*Mecidea indica.*

236. **Mecidea indica**, *Dall. List Hem.* i, p. 139, t. 3, f. 3 (1851).

Pale ochraceous, thickly and finely punctate; eyes black; scutellum elongate; membrane pale hyaline; ventral stigmata brown; apex of the rostrum black; antennæ with the second

joint very long, more than twice the length of the third, dilated towards the base, fourth and fifth joints shorter than the second but longer than the third; antenniferous tubercles spinous externally; abdomen above with a black fascia on each lateral area.

Length 10 to 13 millim.

Hab. Bombay (*Leith*). Poona (*Coll. Dist.*).

Genus ÆNARIA.

Ænaria, *Stål, En. Hem.* v, p. 55 (1876); *Dist. A. M. N. H.* (7) iv, p. 432 (1899).

Type, *Æ. lewisi*, Scott, a Japanese species.

Distribution. North India, Burma, Japan, and Philippine Islands.

Body elongate; head large, its lateral margins moderately sinuate, lateral lobes longer than the central lobe, either meeting beyond it or notched between their apices; basal joint of antennæ not reaching apex of head; rostrum about reaching posterior coxæ; pronotum broader than long, lateral margins oblique, lateral angles subprominent; scutellum long, but not reaching apex of corium; connexivum prominent.

237. **Ænaria elongata**, *Dall.* (Pentatoma) *List Hem.* i, p. 246 (1851); *Stål* (Niphe), *Öfv. Vet.-Ak. Förh.* 1867, p. 516; *Dist. A. M. N. H.* (7) iv, p. 432 (1899).

Ochraceous, thickly and coarsely punctate, connexivum stramineous; body beneath and legs ochraceous; a small spot near coxæ, stigmata, and sometimes an inner series of small abdominal spots, black; antennæ red, fourth and fifth joints black, fourth with the base red, second, fourth, and fifth joints subequal in length, third short but considerably longer than first; femora with small dark punctate spots.

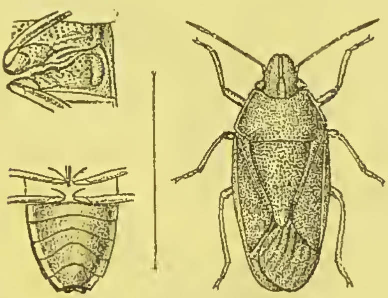

Fig. 82.—*Ænaria elongata.*

Length 11 to 13 millim.

Hab. North India (*Brit. Mus.*). Burma; Teinzo (*Fea*), Rangoon. Tenasserim; Kawkareet (*Fea*).—Also recorded from the Philippines.

Division *AMYNTARIA.*

In this division the head is always moderately large and triangular or subtriangular; the lateral lobes longer than the central lobe, meeting beyond it or cleft at their apices. The body is somewhat broadly ovate, the width of the pronotum being half or more than half the length of body; the mesosternum is carinate, but the abdomen unarmed at base; the lateral margins of the pronotum are generally distinctly, sometimes only obsoletely, serrate or denticulate.

Synopsis of Genera.

I. Head broader between eyes than long.
  A. Lateral margins of the pronotum obsoletely serrate........................ HALYABBAS, p. 142.
II. Head as long as broad or longer than broad.
  B. Lateral margins of the pronotum distinctly serrate.
    a. Head with the lateral lobes meeting in front of central lobe.
      a. Lateral margins of abdomen more or less dilated; connexivum exposed.
        *a*¹. Scutellum as long as wide at base. BELOPIS, p. 143.
        *b*¹. Scutellum a little longer than wide at base .... AMYNTOR, p. 144.
    b. Head with the lateral lobes longer than central lobe, but not meeting in front
        *a*². Head not longer than broad...... OCHROPHARA, p. 146.
      b. Lateral margins of abdomen not dilated nor connexivum exposed.
        *b*². Head considerably longer than broad........................ SENNERTUS, p. 145.

The genus *Paramecus*, Fieb., known only to the writer by description, is included in this division, but cannot be disposed in the synopsis without examination.

Genus HALYABBAS.

Halyabbas, *Dist. Tr. E. S.* 1900, p. 164.

Type, *H. unicolor*, Dist.

Distribution. Burma; Siam; Lombok; Hong Kong.

Body ovate, narrowing to apex, depressed towards head from near base of pronotum; head large, triangular, almost in a line with lateral margins of pronotum, lateral lobes very broad at base, narrowing towards apex and meeting a little in front of central lobe; rostrum reaching base of abdomen; antennæ five-jointed, first joint not nearly reaching apex of head; pronotum about twice as broad as long, lateral margins obliquely straight, very slightly crenulate near eyes, lateral angles obtusely subprominent; scutellum broad at base, somewhat suddenly narrowed at about one-third before apex, which is rounded and reaches base of

membrane; corium with the apical margins convexly rounded; membrane with longitudinal veins; second abdominal segment centrally sulcated.

238. **Halyabbas unicolor**, *Dist. Tr. E. S.* 1900, p. 164, pl. ii, f. 2.

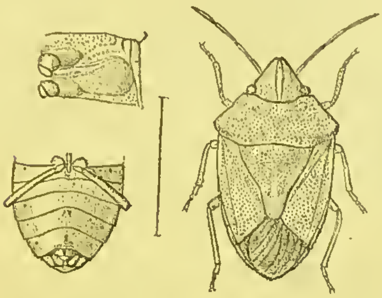

Fig. 83.—*Halyabbas unicolor.*

Pale greenish or ochraceous, above thickly punctate, the corium more finely punctate; antennæ, legs, and rostrum greenish-ochraceous, stigmatal spots black; sternum coarsely punctate; abdomen very finely punctate.

Length 16–17; breadth between pronotal angles 9 to 10 millim.

Hab. Burma; Metanja (*Fea*).—Also received from Siam, Lombok, and Hong Kong.

Genus BELOPIS.

Belopis, *Dist. A. M. N. H.* (5) iii, p. 49 (1879).

Type, *B. unicolor*, Dist.

Distribution. Assam and Burma.

Broadly subovate; head triangular, about as long as broad; lateral lobes longer than the central and meeting beyond it, but generally slightly divided at their apices, their lateral margins distinctly notched before apex; antennæ five-jointed, basal joint not reaching apex of head; rostrum reaching the posterior coxæ; pronotum rather more than twice as broad as long, deflected towards head, the lateral angles prominent, subacute, anterior lateral margins crenulate; scutellum as long as wide at base, gradually narrowed for two-thirds the length, and then extending nearly straight to apex, which is narrowed and

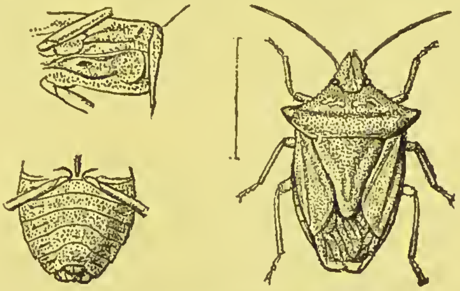

Fig. 84.—*Belopis unicolor.*

rounded; membrane with longitudinal nervures; abdomen convex beneath, moderately dilated laterally, connexivum extending beyond corium; mesosternum with a central carination.

239. **Belopis unicolor**, *Dist. A. M. N. H.* (5) iii, p. 50 (1879).

Ochraceous, thickly and finely punctured; punctures somewhat darker on frontal half of pronotum and head; antennæ reddish, second joint longer than first, shorter than fourth, third and fifth longest, subequal; scutellum with the central area punctate and rather darker, lateral margins concolorous with rest of upper surface; membrane ochraceous; body beneath and legs concolorous, the former thickly and finely punctate.

Length 14; breadth between pronotal angles 10 millim.

Hab. Khási Hills (*Chennell*). Burma; Ruby Mines (*Doherty*), Karennee (*Fea*).

Genus AMYNTOR.

Amyntor, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 519; *id. En. Hem.* v, p. 107 (1876).
Bolaca, *Walk. Cat. Het.* ii, p. 251 (1867).
Œstopis, *Dist. A. M. N. H.* (5) iii, p. 48 (1879).

Type, *A. obscurus*, Dall.

Distribution. Assam and Yunnan.

Ovate, depressed; head triangular, about as long as broad, lateral lobes longer than the central and meeting beyond it, but with their apices strongly cleft; antennæ five-jointed *, basal joint robust, not reaching apex of head; rostrum reaching the posterior coxæ; pronotum about twice as broad as long, the lateral margins denticulated, the lateral angles prominent, slightly prominent and rounded at base, deflexed towards head; scutellum slightly longer than broad at base, gradually narrowed for two-thirds its length and then nearly straight to apex, which is angularly rounded; membrane with longitudinal veins; abdomen moderately dilated, connexivum extending beyond corium, convex beneath; mesosternum with a central carination.

240. **Amyntor obscurus**, *Dall.* (Halys—Dichelops?) *Tr. E. S.* 1849, p. 188, pl. 19, f. 3.
Bolaca unicolor, *Walk. Cat. Het.* ii, p. 251 (1867).
Œstopis terra, *Dist. A. M. N. H.* (5) iii, p. 49 (1879).

Brownish-ochraceous, corium with a purplish hue, thickly and darkly punctate; head very thickly punctate and sometimes darker in hue; antennæ ochráceous, fourth and fifth joints fuscous, with their bases luteous; scutellum somewhat rugulose and darker at base; membrane pale fuscous; abdomen above piceous, connexivum

* When I described the proposed genus *Œstopis* my specimens were all without perfect antennæ, and I was thus led to conclude that the latter were only four-jointed.

broad and distinct; sternum brownish-ochraceous; abdomen beneath a little darker, with a faint central longitudinal black line; legs ochraceous, femora thickly black-speckled.

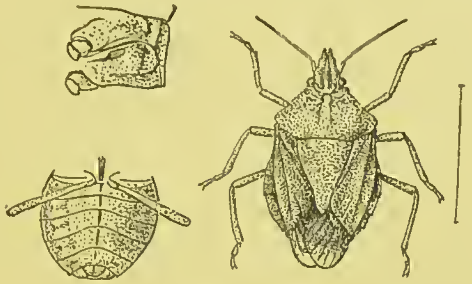

Fig. 85.—*Amyntor obscurus.*

Length 17; breadth between pronotal angles 8 millim.

Hab. Bhutan. Khási Hills (*Chennell*); Nága Hills (*Doherty*); Shillong (*Ind. Mus.*).—Also received from West Yunnan in China.

Genus SENNERTUS.

Sennertus, *Dist. Tr. E. S.* 1901, p. 110.

Type, *S. typicus*, Dist.

Distribution. Burma.

Head subtriangular, considerably longer than broad, the lateral lobes much longer than the central and strongly cleft between their apices, lateral margins nearly straight; antennæ with the basal joint short, robust, not nearly reaching apex of head; pronotum about twice as broad as long, the lateral angles prominent,

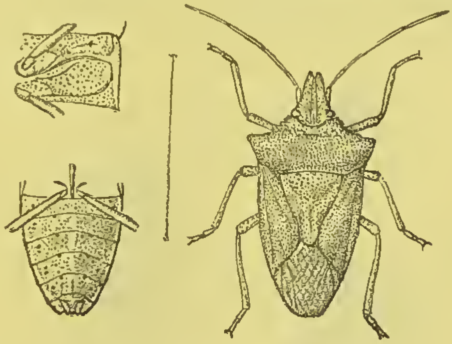

Fig. 86.—*Sennertus typicus.*

robust, and obtusely angulated, the lateral margins moderately concave and serrate; anterior margin concave, posterior margin nearly straight; scutellum shorter than wide at base, moderately convex at basal area, narrowed at about one-third from apex, which is angularly rounded; membrane with longitudinal veins; abdomen

gradually narrowed to apex; rostrum reaching the posterior coxæ; mesosternum with a central carination.

241. **Sennertus typicus**, *Dist. Tr. E. S.* 1901, p. 111.

Brownish-ochraceous, thickly and coarsely punctate, more sparsely punctate on the head, where there is a levigate ochraceous spot at the inner margin of each eye; lateral margins of head and pronotum very narrowly fuscous, posterior margins of pronotal lateral angles narrowly ochraceous, basal margin narrowly levigate; scutellum with a small black spot in each lateral angle; corium with the lateral area more finely punctate than on disk: body beneath ochraceous with scattered brown punctures; stigmata and a double series of small segmental spots on each side piceous; legs and antennæ reddish-ochraceous, femora spotted with fuscous.

Length 22; breadth between pronotal angles 12 millim.

Hab. Burma; Karennee (*Fea*).

Genus OCHROPHARA.

Ochrophara, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 626.

Type, *O. emarginata*, Stål, a species found in the Philippine Islands.

Distribution. India, Ceylon, Burma, and the Malayan Archipelago.

Head more or less triangular, lateral lobes longer than the central lobe, their apices entirely divergent, lateral margins beyond eyes prominently angulated; first joint of antennæ not reaching apex of head; rostrum about or almost reaching the posterior coxæ: pronotum with the lateral margins concavely sinuate, anteriorly finely and obscurely crenulate; scutellum reaching to about the middle of the abdomen; abdomen unarmed at base.

242. **Ochrophara corinna**, *Kirby* (Pentatoma?), *J. Linn. Soc., Zool.* xxiv, p. 84, pl. 4, f. 12 (1891).

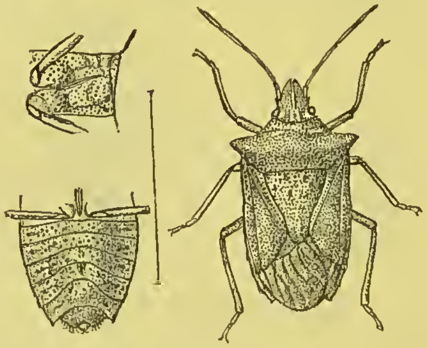

Fig. 87.—*Ochrophara corinna.*

"Brown, thickly covered with darker punctures; head rather long, with two central grooves, front bifid; pronotum deeply

emarginate before the lateral angles, rendering them nearly straight in front; they are prominent, moderately long, and slightly obtuse at the tips. Under surface paler, mottled and speckled all over with black; ventral surface of abdomen with obsolete blackish markings, and sometimes with a zigzag row of blackish markings on each side. Legs, especially femora, distinctly marked with black dots." (*Kirby.*)

Length 11; breadth between pronotal angles 7 millim.

Hab. Ceylon; Pundaloya (*Green*).

243. **Ochrophara montana**, *Dist. Tr. E. S.* 1900, p. 165.

Ochraceous, somewhat thickly and more darkly punctate; lateral margins of the corium, apex of scutellum, and a faint or broken central fascia to same, body beneath, legs, rostrum, and antennæ pale ochraceous; fourth and fifth joints of antennæ reddish-ochraceous. Body elongate; second joint of antennæ shorter than the third, third and fifth subequal in length, fourth a little longest; pronotum with a narrow levigate impression, posterior angles obtusely subprominent; membrane pale greyish.

Length 12–13; breadth between pronotal angles $5\frac{1}{2}$ millim.

Hab. Nága Hills (*Chennell*). Central Provinces; Chanda. Burma: Tavoy, Karen Hills (*Doherty*); Bhamo, Karennee (*Fea*).

This species is structurally remarkable in having the pronotal angles either obtusely rounded or provided with a short acute forwardly-directed spine, which in some specimens is on one angle only.

The species is also a forest-pest. Mr. L. de Nicéville forwarded to me specimens for identification and wrote:—"In Chanda (Central Provinces) reported to be doing immense damage over 1200 squaro miles of country to the bamboo-seed crop. As is generally known, the bamboo but seldom flowers, and when it does—often after a famine—the seed is a valuable food for the starving people." Mr. E. P. Stebbing, Forest Entomologist to the Government of India, has given the same report and forwarded specimens. He identifies the bamboo as *Dendrocalamus strictus.*

Genus PARAMECUS.

Paramecus, *Fieber, Rhynchotographia*, p. 34 (1851).

Type, *P. ruficornis*, Fieb.

Distribution. At present recorded only from India.

Body elongate, somewhat convex; head elongate, almost equally broad throughout; lateral lobes somewhat longer than the central lobe, their margins rounded; antennæ with the third joint shortest; rostrum stout, extending beyond the intermediate coxæ; pronotum hexagonal, convex between the humeral angles, which are prominent and furnished with a small tooth; corium narrowed at the apex, longer than the scutellum.

A genus unknown to the writer, but apparently belonging to this Division.

244. **Paramecus ruficornis**, *Fieb. Rhynchotographia*, p. 35 (1851).

Elongate; ochraceous, blackly punctate; pronotum with two small black spots on anterior area; scutellum with a slightly punctured pale median fascia; marginal line of pronotum and marginal spot yellow; antennæ, base of abdomen, dorsum, and legs yellow-ferruginous; membrane sordid, the veins darker; stigmata and pectus black.

Length $12\frac{1}{2}$ millim.

Hab. ? Burma ("Hinterindien").

I have not seen this species.

Division *CARPOCORARIA.*

This division can be separated at once from the *Amyntaria* by the shape of the head, which, whilst always moderately and sometimes very large, is not triangular, though sometimes a little narrowed in front, and often rounded; the lobes are of equal length, or the lateral slightly longer than the central, but never meeting beyond it, sometimes the central lobe is a little prominent, as in *Cappæa*; the margins of the pronotum are entire, not serrate, though obsoletely so in *Mormidella*.

This includes the Divisions *Tropycorypharia*, *Cappæaria*, and *Carpocoraria* defined by Stål (En. Hem. v, 1876) and named by Atkinson (J. A. S. B. 1888, lvii, pp. 19, 21, 29).

Synopsis of Genera.

I. Basal angles of scutellum with a profound oblong black impression .... MORMIDELLA, p. 150.
II. Basal angles of scutellum without or with only a small rounded impression.
  A. Odoriferous orifices on metasternum long, acuminate.
    a. Connexivum unicolorous, neither spotted nor punctate .... NIPHE, p. 150.
    b. Connexivum spotted or punctured with black.
      a. Head longer than pronotum .... CAPPÆA, p. 149.
      b. Head not longer than pronotum.
        a'. Margins of pronotum neither elevated nor callous .... HALYOMORPHA, p. 152.
        b'. Margins of pronotum elevated or callous .... TOLUMNIA, p. 153.
    c. Connexivum punctured only with brown or black .... PALOMENA, p. 155.
  B. Odoriferous orifices on metasternum short, abruptly abbreviated.
    d. Frena not extending beyond middle of scutellum.
      a. Anterior lateral margins of pronotum acutely reflexed.................. CARPOCORIS, p. 157.
      b. Anterior lateral margins of pronotum not acutely reflexed .... CODOPHILA, p. 158.
    e. Frena extending beyond middle of scutellum .... DOLYCORIS, p. 159.

Genus CAPPÆA.

Cappæa, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 146 (1862).

Type, *C. taprobanensis*, Dall.

Distribution. Oriental Region.

Head slightly longer than the pronotum, margins obliquely straight, apex rounded, the central lobe somewhat prominent and slightly longer than the lateral lobes; pronotum sinuate at anterior margin, truncate behind eyes, lateral margins oblique, lateral angles subprominent; scutellum broad, longer than half the abdomen, somewhat gradually narrowing to apex; membrane short but extending a little beyond the apex of the abdomen; rostrum reaching the second abdominal segment; abdomen with a short basal furrow.

245. **Cappæa taprobanensis**, *Dall.* (Pentatoma) *List Hem.* i, p. 244 (1851); *Stål, En. Hem.* v, p. 74 (1876).
Cappæa multilinea, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 147, f. 17 (1862).

Black, with the following ochraceous or testaceous markings:—lateral margins and three longitudinal lines to head; margins, a

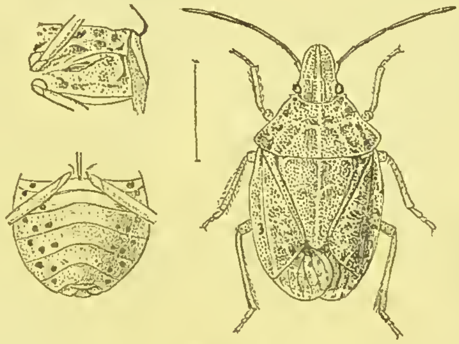

Fig. 88.—*Cappæa taprobanensis.*

central fascia, and lineate reticulations on lateral areas of pronotum; a central fasciate line and two united more or less curved lines on basal area to scutellum; margins, a submarginal line, and other irregular markings to corium, luteous: body beneath and legs luteous or ochraceous, body more or less spotted with black on the lateral areas, legs finely spotted with black; antennæ fuscous, basal joint ochraceous spotted with fuscous; membrane fuliginous with brown spots.

Length 10 to $11\frac{1}{2}$ millim.

Hab. Sikhim (*Ind. Mus.*). North Khási Hills (*Chennell*). Malabar (*Ind. Mus.*). Coonoor (*Atkins. Coll.*). Ceylon (*Green*). Also received from Java and Sumatra. Gregarious in Ceylon and found on the bark and trunks of orange-trees (*E. E. Green*).

Genus MORMIDELLA.

Mormidella, *Horv. Termesz. Füzetek*, xii, p. 30 (1889).

Type, *M. pauli*, Horv.
Distribution. Kashmir.

Body oval; head about as long as the pronotum, apex rounded, lobes of equal length, rostrum almost reaching posterior coxæ; antennæ five-jointed, first joint not reaching apex of head; pronotum somewhat convex, the anterior margin profoundly sinuated, the anterior lateral margins obsoletely crenulate and moderately laminate and reflexed, posterior angles not prominent; scutellum broad, about as wide at base as long, blackly and profoundly impressed at basal angles; corium with the lateral margins somewhat ampliated; membranal veins simple; base of abdomen unarmed; tibiæ above sulcated.

The affinities of this genus are with a small group of Australasian and Malayan genera.

246. **Mormidella pauli**, *Horv. Termesz. Füzetek*, xii, p. 30 (1889).

Pale fuscous, densely punctate; head, excluding basal streak, sublateral margins to pronotum, an obsolete discal fascia to scutellum, and some anterior lateral spots to prosternum brassy black; lateral margins of the pronotum pale, straight; an oblique oblong callosity at each basal angle of scutellum; a narrow subcostal fascia to corium impunctate; membrane obscurely hyaline, the veins fuscous: body beneath with antennæ, rostrum, and legs flavo-testaceous, punctured with fuscous: the two terminal joints of antennæ and the fourth joint of the rostrum black; abdomen beneath pale brassy-black, its margins pale ochraceous containing an intra-marginal black line.

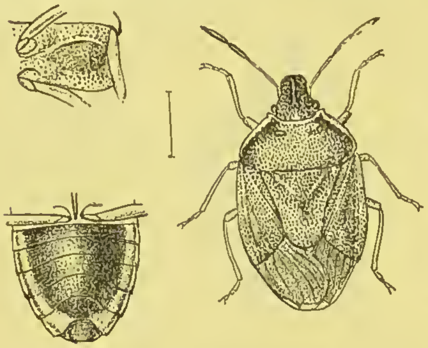

Fig. 89.—*Mormidella pauli.*

Length $7\frac{1}{2}$ millim.

Hab. Kashmir.

I am indebted to Dr. Horvath for the opportunity of figuring this species.

Genus NIPHE.

Niphe, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 516.

Type, *N. subferruginea*, Westw.
Distribution. Ethiopian and Oriental Regions.

Head a little narrowed forwards, the lateral margins slightly

sinuate near middle, lateral lobes very slightly longer than the central lobe, ocelli much nearer to the eyes than to each other; rostrum extending to the posterior coxæ; antennæ slender, first joint almost reaching apex of head; pronotum with the anterior margin broadly sinuate, but truncate behind the eyes, lateral margins straight, lateral angles obtusely subprominent; scutellum much longer than broad, its apex prominently narrowed; mesosternum carinate; connexivum distinctly visible beyond the margins of the corium, the segmental angles very slightly prominent.

247. **Niphe subferruginea**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 35 (1837); *Dist. P. Z. S.* 1900, p. 810.
Pentatoma cephalus, *Dall. List Hem.* i, p. 245 (1851).
Pentatoma lateralis, *Walk. Cat. Het.* ii, p. 301 (1867).

Ochraceous, thickly and darkly punctate; lateral margins of the pronotum, basal lateral margins of corium, apex of scutellum, connexivum, body beneath, and legs pale ochraceous; antennæ testaceous, with the apex of the third and apical halves of fourth and fifth joints black; sternum somewhat coarsely but palely punctate and with about two small black spots on the lateral areas of each segment; lateral areas of abdomen with scattered small spots and the stigmata black.

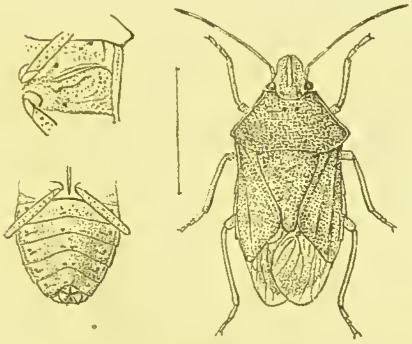

Fig. 90.—*Niphe subferruginea.*

Length 12 to 14; breadth between pronotal angles 6 to 7 millim.
Hab. North Khási Hills (*Chennell*). Bombay (*Leith*). Travancore. Burma; Karennee, Palon (*Fea*).

248. **Niphe vittativentris**, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 625.

Above ochraceous, uniformly darkly punctate, margins concolorous, the basal lateral margin of corium very narrowly pale ochraceous; body beneath and legs ochraceous, sparingly darkly punctate; legs prominently blackly punctate; abdomen beneath with a central black longitudinal fascia; antennæ stramineous, apices of second and third and more than apical halves of fourth and fifth joints dark fuscous.
Length 10; breadth between pronotal angles 5 millim.
Hab. Bombay (*Leith*). The species was originally described from the Philippines.

Genus HALYOMORPHA.

Halyomorpha, *Mayr, Verh. z.-b. Ges. Wien*, xiv, p. 911 (1864).

Type, *H. picus*, Fabr.

Distribution. Ethiopian and Oriental Regions.

Head broad at apex, lateral margins narrowly reflexed and a little sinuate, lobes of about equal length; antennæ five-jointed, first joint not reaching apex of head; eyes large, sessile; rostrum reaching the second or third abdominal segment; pronotum with a short tooth at each anterior angle, lateral margins oblique and slightly reflexed, lateral angles subprominent; scutellum with the apical third much narrowed, and with a small rounded impression at each basal angle; tibiæ externally broadly sulcate.

249. **Halyomorpha picus**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 115 (1794); *id.* (Edessa) *Syst. Rhyng.* p. 153 (1803).
Cimex marmoreus, *Fabr. Ent. Syst. Suppl.* p. 534 (1798); *id.* (Edessa) *Syst. Rhyng.* p. 153 (1803).
Cimex cinnamomeus, *Wolff, Ic.* iii, p. 99, f. 93 (1802).
Halys timorensis, *Westw. in Hope Cat.* i, p. 22 (1837); *Dall.* (Pentatoma) *List Hem.* i, p. 242 (1851); *Mayr* (Halyomorpha), *Reise Nov., Hem.* p. 50 (1866).
Pentatoma halys, *Stål, Öfv. Vet.-Ak. Förh.* 1855, p. 182.
Pentatoma trivialis, *Dohrn, Stett. ent. Zeit.* xxi, p. 400 (1860).
Pœcilometis mistus, *Uhler, Proc. Ac. Phil.* 1860, p. 223.
Dalpada brevis, remota, & proxima, *Walk. Cat. Het.* i. pp. 226–7 (1867).

Very variable in colour and size. Above greyish-ochraceous, ochraceous, testaceous, or castaneous, thickly and darkly punctate; head, anterior and lateral areas of pronotum more or less marked with dark fuscous or brownish; a small dark spot outwardly margined with levigate ochraceous at basal angles of scutellum: body beneath and legs pale luteous, the lateral areas punctate, lateral areas of head and sternum more or less prominently blackly punctate; rostrum reaching second abdominal segment; antennæ with the fourth and fifth joints a little the longest and subequal, third longer than second.

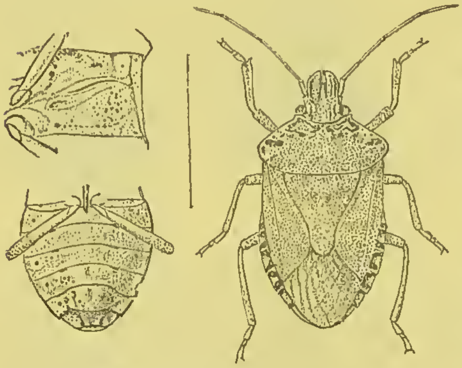

Fig. 91.—*Halyomorpha picus.*

Var. Scutellum with the apex pale, impunctate.

Length 12 to 17; breadth between pronotal angles 7 to 10 millim.

Hab. North Khási Hills (*Chennell*); Bombay (*Leith*); Calcutta (*Ind. Mus.*); Bangalore (*Cameron*); Nilgiris (*Hampson*); Tri-

vandrum. Ceylon. Burma; Karennee, Palon (*Fea*).—Also a common species throughout Malayana, and found in China and Japan.

250. **Halyomorpha scutellata**, *Dist. A. M. N. H.* (5) iii, p. 51 (1879).

Castaneous, thickly punctate; margins of head, lateral margins of pronotum, antennæ, legs, and rostrum black or dark blackish-green; scutellum with the discal basal area continued as a fascia to apex luteous, levigate, with a few scattered very coarse punctures; membrane fuliginous; body beneath pale sanguineous; a large spot on pronotum behind each eye, a large patch at the region of the odoriferous apertures, the margins of the pronotal angles, stigmata and marginal spots (sometimes connected), and a large spot on the sixth abdominal segment bluish-black. Rostrum about reaching second abdominal segment; third, fourth, and fifth joints of antennæ subequal in length.

Length 16; breadth between pronotal angles 9 millim.

Hab. Khási Hills (*Chennell*). Bombay (*Leith*).

251. **Halyomorpha murrea**, *Dist. Tr. E. S.* 1887, p. 344, t. 12, f. 5.

Above pale greenish-ochraceous, corium (excluding outer marginal area) and basal area of pronotum with a slight purplish tinge; head with the lateral margins, margins of central lobe, and some basal linear spots black; antennæ with the basal joint pale speckled with black, second and third joints purplish, apical half of third black (remaining joints in type mutilated); pronotum with the lateral margins and a double series of spots on anterior half ochraceous, and near these spots a number of small somewhat tessellate black spots; scutellum with four black spots at base, four more obscure and broken across disk, two on basal half, some minute tessellate spots at apex, and a series of dark punctures on each lateral margin from basal third to apex; corium minutely and sparingly darkly punctate, costal area greenish thickly spotted with black, lateral basal margins ochraceous; connexivum ochraceous spotted with black; membrane obscure creamy-white speckled with black: body beneath and legs pale greenish; spots to sternum, a spot at base of each anterior tibia, spots near apices of intermediate and posterior femora, a spot at base and apex of each apical segment, and apex of rostrum black.

Length 15; breadth between pronotal angles 8 millim.

Hab. Sikhim (*Atkinson*).

Genus TOLUMNIA.

Tolumnia, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 515; *id. En. Hem.* v, p. 57 (1876).

Type, *T. trinotata*, Westw., a species found in Cambodia and the Malay Archipelago.

Distribution. Oriental Region.

Pronotum with the anterior and the anterior-lateral margins

elevated, the anterior margin concave, slightly truncate behind the eyes, the lateral angles subprominent; head forwardly narrowed, the apex rounded, lateral margins slightly sinuate near middle, central lobe slightly longer than the lateral lobes; rostrum passing the posterior coxæ; corium with the apical margin very slightly sinuate near the apical angle, which is somewhat rounded at extremity; mesosternum distinctly carinate; abdominal segmental angles slightly acutely prominent; anterior tibiæ sometimes moderately dilated.

252. **Tolumnia latipes**, *Dall.* (Pentatoma) *List Hem.* i, p. 238 (1857); *Dist. A. M. N. H.* (7) iv, p. 436 (1899).
Dalpada obtusicollis, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 143, f. 10 (1862).
Pentatoma trispila, *Walk. Cat. Het.* ii, p. 302 (1867).
Var. Pentatoma contingens, *Walk. loc. cit.* p. 302.

Pale chocolate-brown, thickly punctured and obscurely irrorated with ochraceous; central lobe to head, lateral and anterior margins to pronotum, a large spot in each basal angle of the scutellum and the apex to same luteous; connexivum alternately black and luteous: body beneath and legs luteous, very finely punctate; three small spots on each lateral area of the sternum, apices of femora, tibiæ, tarsi, and apex of rostrum, black; antennæ ochraceous, first joint blackish, fourth and fifth joints black with their bases luteous.

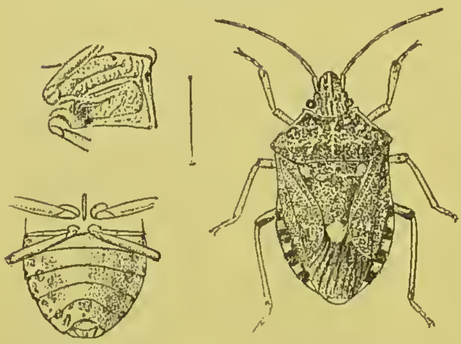

Fig. 92.—*Tolumnia latipes.*

Var. *contingens*, Walk. Scutellum without the large pale basal angular spots.

Length 9 to 11; breadth between pronotal angles 5 to 7 millim.

Hab. Sikhim; Mungphu (*Atkinson*). North Khási Hills (*Chennell*); Nága Hills (*Doherty*). Trivandrum. Burma; Bhamo, Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Also received from Siam, the Malay Peninsula, Sumatra, Java, and Hong Kong.

253. **Tolumnia maxima**, sp. n.

Resembling *T. latipes*, but much larger, much more coarsely punctate, lateral pronotal angles more prominent; antennæ with the first, second, and third joints ochraceous speckled with fuscous, apex of third joint pale ochraceous; pronotum more largely irrorated with ochraceous, especially on the anterior and lateral areas; basal angular spots to scutellum comparatively smaller and

reddish-ochraceous; sternum with a double row of lateral spots which are sometimes greenish, lateral abdominal margin with two dark greenish spots at the apices of the incisures; a central elongate black spot on the disk of the penultimate abdominal segment.

Length 15; breadth between pronotal angles 8 millim.

Hab. Tenasserim; Myitta (*Doherty*).

254. **Tolumnia antennata**, sp. n.

General appearance of the preceding species but broader, and in some respects approaching the previous genus (*Halyomorpha*). The margins of the head are more reflexed and the central lobe not a little longer than the lateral lobes; the lateral margins of the pronotum are also scarcely callous though reflexed; its other characters, however, are distinctly those of *Tolumnia*.

Above as in *T. maxima*, but the ochraceous irroration to the pronotum transverse and discal; antennæ black, base of apical joint luteous, a double series of small black lateral spots to the sternal segments; stigmata and two small marginal spots at apices of abdominal incisures black; femora with a narrow apical line beneath and posterior femora with two subapical spots, black; apices of the anterior tarsi black.

Length 13; breadth between pronotal angles 7½ millim.

Hab. Malabar (*Coll. Dist.*).

255. **Tolumnia immaculata**, *Dist. Tr. E. S.* 1900, p. 168.

Brassy-ferruginous, thickly and coarsely punctate; body beneath and legs ochraceous, coarsely and darkly punctate; a large central piceous spot to mesosternum, and a very dark castaneous broad irregular central fascia to abdomen; legs punctured with brownish, femora with two large brownish spots beneath a little before apex; antennæ ochraceous, fourth and fifth joints and the apex of the third piceous, bases of fourth and fifth joints ochraceous. Head long and narrow; second joint of antennæ a little longer than the third, fourth and fifth subequal in length.

Var. Colour above ochraceous; head, anterior area of pronotum, and sometimes apex of scutellum only, brassy-ferruginous.

Length 8½ to 10; breadth between pronotal angles 5 to 5½ millim.

Hab. Nilgiri Hills (*Hampson*); Kotagiri (*Atkinson Coll.*). Ceylon (*Green & Lewis*).

Genus **PALOMENA**.

Palomena, *Muls. & Rey, Pun. France, Pent.* pp. 271 & 277 (1866); *Stål, En. Hem.* v, p. 75 (1876).

Type, *P. viridissima*, Poda.

Distribution. Palæarctic Region and Northern India.

Head moderately rounded in front, antennæ with the second joint a little longer than the third; connexivum extending beyond

the corium, nearly uniformly punctured with brown or black; back of the abdomen black. These are the characters relied upon by Mulsant and Rey to separate the genus from some other closely allied genera which do not occur in this fauna.

I enumerate four species. Atkinson (J. A. S. B. 1888, p. 28) includes *P. amplificata*, Dist., in the fauna, under the habitat "Assam (?)," but I think erroneously. That species was founded on specimens from North China.

a. *Pronotal angles rounded, not prominently spinous.*

256. **Palomena viridissima**, *Poda* (Cimex), *Ins. Mus. Graec.* p. 56. 10 (1761); *Dist. Sec. Yarkand Miss., Rhynch.* p. 4 (1879).
Cimex prasinus, *Fieber*, *Eur. Hem.* p. 339 (1861).

Above green, margins of head, lateral margins of pronotum, basal lateral margin of corium, apical margins of scutellum, and lateral margins and incisures of the connexivum *very narrowly* reddish-ochraceous; antennæ ochraceous or rufous, last joint with its apical area fuscous; membrane fuliginous, reflecting the dark colour of the upper surface of the abdomen; body beneath ochraceous or greenish; stigmata and apex of the rostrum black. The body above is thickly and somewhat coarsely punctate, lateral angles of the pronotum subprominent and rounded.

Length 13 to 15; breadth between pronotal angles 8 millim.

Hab. Punjab; Murree (*Stoliczka*).—A well-known European species extending in range to N.W. Siberia.

257. **Palomena reuteri**, *Dist. Tr. E. S.* 1879, p. 122; *id. Sec. Yarkand Miss., Rhynch.* p. 4, f. 2 (1879).

Green; head, anterior margin of pronotum, basal half of scutellum, and membrane bronzy; head obscurely rugulose, very thickly and strongly punctured with black, central lobe slightly shorter than the lateral lobes; rostrum luteous with the apex black; antennæ luteous, apical joint somewhat fuscous, third joint longer than second and rather shorter than fourth; pronotum obscurely rugulose, very thickly and strongly darkly punctate, lateral angles somewhat prominent and rounded; scutellum thickly darkly punctate, slightly rugulose at base; corium thickly and darkly punctate; abdomen above black, the connexivum luteous punctured with black: body beneath pale luteous, more or less suffused with greenish.

Allied to the preceding species, but differing by its smaller size and shorter antennæ; it is also more straightened and narrowed than that species, and the structure of the pronotum is different.

Length 11 to 12; breadth between pronotal angles 6 to 7 millim.

Hab. Punjab; Murree (*Stoliczka*). Kashmir (vide *Horvath*).

b. *Pronotal angles prominently and spinously produced.*

258. **Palomena spinosa**, *Dist. Tr. E. S.* 1880, p. 149, t. 5, f. 3.

Above green, thickly, coarsely, and darkly punctate; head with the lateral lobes longer than the central and cleft at their apices; antennæ with the first, second, and third joints green, fourth (excepting base) and whole of fifth brown, second longer than third, fourth and fifth subequal; pronotum coarsely punctate, somewhat sparingly so on disk, with the lateral angles produced into broad obtusely pointed spines, somewhat rounded and narrowly black at apices; scutellum thickly punctate, more sparingly so at apex; membrane brassy, shining; connexivum narrowly luteous on outer margin and at segmental incisures: body beneath paler, disk of abdomen, coxæ, and bases of femora somewhat luteous; legs green, tarsi brown; rostrum luteous, its apex black.

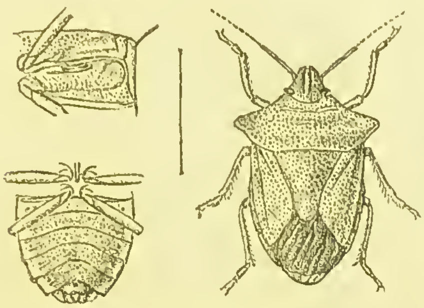

Fig. 93.—*Palomena spinosa.*

Length 13 to 14; breadth between pronotal angles 9 to 10 millim.

Hab. Sind (*Coll. Dist.*).

259. **Palomena unicolor**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 41 (1837); *Dist. P. Z. S.* 1900, p. 811, pl. lii, f. 5.

Allied to the preceding species (*P. spinosa*), but with the pronotal angles more acute, body a little narrower and more elongate.

Length 16; breadth between pronotal angles 8 millim.

Hab. Bengal (*Oxford Museum*).

Genus CARPOCORIS.

Carpocoris, *Kolenati, Melet. Ent.* iv, p. 45 (1846); *Muls. & Rey, Pun. France, Pent.* p. 237 (1866); *Stål, Öfv. Vet.-Ak. Förh.* 1872, 3, p. 37.
Mormidea (part.), *Amy. & Serv. Hém.* p. 134 (1843).
Subg. Antheminia, *Muls. & Rey, Pun. France, Pent.* p. 254 (1866).

Type, *C. lynx*, Fabr., a Palæarctic species.

Distribution. Palæarctic Region and Northern India.

Head moderately elongate, the lateral lobes a little longer than the central, apex somewhat truncate; first joint of antennæ not reaching apex of head; pronotum with the lateral margins oblique, lateral angles obtusely subprominent, the anterior lateral margins acutely reflexed; frena not extending beyond the middle of the scutellum.

260. **Carpocoris nigricornis**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 94 (1794); *Dist. Sec. Yarkand Miss., Rhynch.* p. 5 (1879); et syn. cf. *Leth. & Sev. Cat. Gén. Hém.* i, p. 122 (1893).

Ochraceous, somewhat thickly punctate, corium often more or less purplish; antennæ and lateral margins of head and eyes black; pronotum with four longitudinal series of fasciate black punctures, which are sometimes almost obsolete and generally do not extend beyond the apical area; lateral angles sometimes black; connexivum punctately black on each side of the incisures; body beneath and legs ochraceous; apex of the rostrum black.

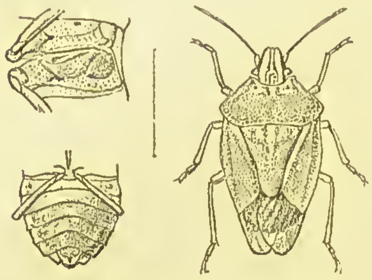

Fig. 94.—*Carpocoris nigricornis.*

Length 11 to 14; breadth between pronotal angles 6½ to 8 millim.

Hab. Kashmir; Sind Valley (*Stoliczka*). Simla (*Coll. Dist.*).—A somewhat common Palæarctic species. I have received it from Shantung in North China and from Japan, and it was collected by Stoliczka near Yarkand.

261. **Carpocoris pallidus**, *Dall.* (Pentatoma) *List Hem.* i, p. 234 (1851); *Dist. A. M. N. H.* (7) iv, p. 436 (1899).

Carpocoris fuscispinus (part.), *Leth. & Sev. Cat. Gén. Hém.* i, p. 121 (1893).

Carpocoris nigricornis (part.), *Leth. & Sev. loc. cit.* p. 122.

A species closely allied to *C. nigricornis*, and differing only by the more elongate body and by the lateral angles of the pronotum, which are only subprominent.

Length 14; breadth between pronotal angles 7½ millim.

Hab. North India (*Brit. Mus.*).

Genus CODOPHILA.

Codophila, *Muls. & Rey, Pun. France, Pent.* p. 237 (1866); *Stål, Öfv. Vet.-Ak. Förh.* 1872, 3, p. 38.

Type, *C. varia*, Fabr., a Palæarctic species.

Distribution. Palæarctic and western portion of the Oriental Region; also recorded from Abyssinia.

Allied to *Carpocoris*, but differing by having the anterior lateral margin of the pronotum obtuse, not acutely reflexed.

262. **Codophila maculicollis**, *Dall.* (Pentatoma) *List Hem.* i, p. 234 (1851); *Stål, En. Hem.* v, p. 76 (1876).

Pentatoma arabica, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 233.

Ochraceous, somewhat sparingly and coarsely punctate; antennæ, two central fasciæ to head (converging anteriorly), four longitudinal

fasciæ to pronotum, the central pair confined to the anterior area, black; basal area of pronotum castaneously punctate; scutellum with six black spots, four basal, the two central longest, and two subapical; corium much punctured with dark castaneous or black,

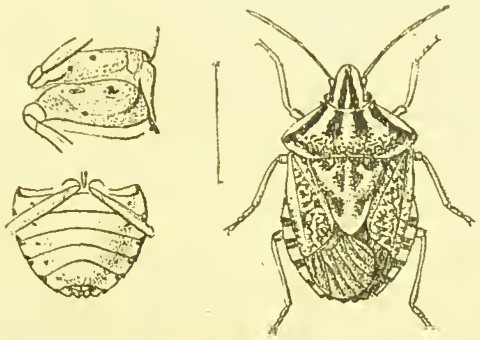

Fig. 95.—*Codophila maculicollis.*

the basal lateral margin impunctate; membrane dark fuliginous; connexivum ochraceous, black at incisures: body beneath ochraceous, spots on lateral segmental areas of sternum, stigmata, and marginal spots to abdomen black; legs, excluding femoral bases, brownish-ochraceous.

Length 14 to 15; breadth between pronotal angles 8 millim.

Hab. North India (*Brit. Mus.*). Bombay (*Coll. Dist.*).—Also recorded from Arabia and Abyssinia.

Genus **DOLYCORIS.**

Carpocoris, *subg.* Dolycoris, *Muls. & Rey, Pun. France, Pent.* p. 238 (1866).

Dolycoris, *Stål, Öfv. Vet.-Ak. Förh.* 1872, 3, p. 38; *En. Hem.* v, p. 57 (1876).

Type, *D. baccarum,* Linn.

Distribution. Palæarctic Region. British India. Formosa.

Closely allied to the two preceding genera (*Carpocoris* and *Codophila*), but differing from both by having the frena extending beyond the middle of the scutellum.

263. **Dolycoris baccarum,** *Linn.* (Cimex) *Faun. Suec.* ii, pp. 249, 928 (1761); *Dall.* (Pentatoma, part.) *List Hem.* i, p. 235 (1851); *Dist. Sec. Yarkand Miss., Rhynch.* p. 5 (1879).
Cimex verbasci, *De Geer, Mém.* iii, p. 257, pl. 14, f. 5 (1773).
Cimex nebulosus, *Poda, Ind. Mus. Graec.* 56. 8 (1761).
Cimex subater, *Harris, Exp. Engl. Ins.* p. 90, t. 26 (1781).
Cimex albidus, *Gmel. Syst. Nat.* xiii, p. 2161. 600 (1788).
Ælia depressa, *Westw. in Hope Cat.* p. 32 (1837).
Pentatoma inconcisa, *Walk. Cat. Het.* ii, p. 301 (1867).
Var. brevipilis, *Reut. Öfv. Finska Vet. Soc. Förh.* 1891, p. 176.

Brownish-ochraceous, thickly punctate; antennæ black, basal joint and bases of the remaining joints luteous; apical margins

of the lateral lobes to head, lateral margins of pronotum, apex of scutellum, body beneath, and legs luteous; small black spots near coxæ; lateral areas of the prosternum and disk of the abdomen sparsely blackly punctate, connexivum spotted with black at the incisures; stigmata and marginal abdominal spots black; membrane greyish, the veins a little darker.

Length 12 to 14 millim.

Hab. Kashmir; Sind Valley (*Stoliczka*). Bangalore (*Cameron*).—A common Palæarctic species found generally throughout the region.

264. **Dolycoris indicus**, *Stål, En. Hem.* v, p. 76 (1876); *Horv. Termesz. Füzetek*, xii, p. 31 (1889).

Closely allied to the preceding species, but differing by the narrower form; head, pronotum, and scutellum less densely punctate; membrane longer; anterior lateral margins of the pronotum more broadly pallid, sparingly punctured with black at base.

Fig. 96.—*Dolycoris indicus.*

Length $9\frac{1}{2}$ millim.

Hab. Nága Hills (*Chennell*); Darjeeling. Bombay (*Leith*): Dekhan, Bangalore, Calcutta (*Ind. Mus.*).

Division *ÆSCHROCORARIA.*

A division at present represented only by two genera in this fauna and marked by very distinct characters. The head is long, with the lateral lobes much longer than the central; the pronotal angles are very prominently dilated; the scutellum is broad and short; the membrane has the veins more or less reticulate and does not reach the apex of the abdomen.

Synopsis of Genera.

A. Lateral lobes of head with their apices acuminate. Body subelongate; pronotal angles directed forwardly . . . . SCYLAX, p. 160.

B. Lateral lobes of head with their apices subtruncate. Body short and broad; pronotal angles laterally produced . . . . ÆSCHROCORIS, p. 162.

Genus SCYLAX.

Scylax, *Dist. Tr. E. S.* 1887, p. 345.

Type, *S. porrectus*, Dist.

Distribution. At present known only from Brit. India.

Head much longer than broad, lateral lobes much longer than

central and slightly concave, their apices obtusely pointed and divided in female, but apparently meeting or coalesced in male; second joint of antennæ barely reaching apex of head. Pronotum about twice as broad as long, the lateral angles strongly produced forwards into robust obtuse spines, the apices of which are about parallel to the eyes. Scutellum short, its length less than its breadth at base, the lateral margins obliquely directed inward to about middle, and then straight to near apex, which is broadly rounded; corium short, inner angle not reaching apex of scutellum; membrane not reaching apex of abdomen, the veins more or less reticulate. Rostrum stout, reaching the posterior coxæ; mesosternum centrally carinate.

265. **Scylax porrectus**, *Dist. Tr. E. S.* 1887, p. 345, pl. 12, f. 7.

Body above ochraceous; head, pronotum, and scutellum somewhat thickly punctate; pronotum with one short central levigate linear and two short transverse spots; scutellum with a central longitudinal levigate fascia which possesses a median series of minute punctures, and a few scattered punctures on each side; corium with the costal area very sparingly and finely punctate, the inner area coarsely and somewhat thickly punctate; membrane pale brownish-ochraceous; body beneath and legs ochraceous; the body somewhat finely and darkly punctate and with a central and two sublateral fasciæ formed of blackish punctures; legs speckled with brownish. Lateral lobes of head divided to near apex of central lobe; membrane extending to about half of the anal appendage.

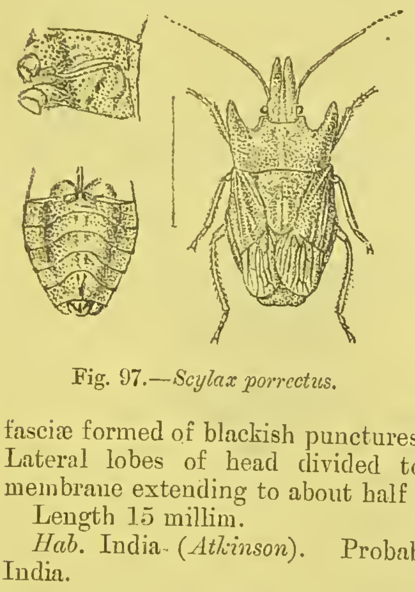

Fig. 97.—*Scylax porrectus.*

Length 15 millim.

Hab. India (*Atkinson*). Probably obtained in North-eastern India.

266. **Scylax macrinus**, *Dist. Tr. E. S.* 1887, p. 346, pl. 12, f. 9.

Closely allied to *S. porrectus*, but differing by the somewhat smaller size, the lateral lobes of the head only divided for a short distance before the apex (coalesced in male), and the membrane not reaching the apex of the last abdominal segment.

Length 14 to 15 millim.

Hab. Sikhim (*Atkinson*).

Genus ÆSCHROCORIS.

Æschrus, *Dall. List Hem.* i, p. 220 (1851), nom. præocc.
Æschrocoris, *Bergr. Ent. Nachr.* xiii, p. 152 (1887).

Type, *Æ. obscurus*, Dall.
Distribution. Oriental Region.

Head elongated, lateral margins slightly concave, apex truncate, lateral lobes much longer than central and meeting in front of it, apical angles obtusely acute; antennæ five-jointed, basal joint not nearly reaching apex of head; rostrum passing the posterior coxæ; pronotum more than twice as broad as long, its lateral angles produced in stout, somewhat cylindrical processes directed slightly upwards and forwards, their apices emarginate and deflected. Scutellum broad, short, its length much less than its width at base, its basal area gibbous, its apex tuberculate; corium small and short; membrane with reticulated veins. Body beneath strongly convex, abdomen with a small tubercle at the lateral posterior angle of each segment; mesosternum broadly sulcate.

267. **Æschrocoris obscurus**, *Dall.* (Æschrus) *List Hem.* i, p. 221, pl. 8, f. 4 (1851).

Brownish-ochraceous; head, apices of pronotal angles, a spot in each basal angle, and the apical tubercle to scutellum brassy-black;

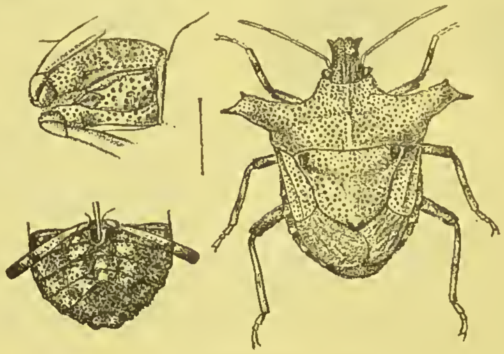

Fig. 98.—*Æschrocoris obscurus.*

body beneath black, with scattered brownish-ochraceous elevations; legs brownish-ochraceous, femora brownly punctate, with base, apex, and an annulation before apex black; tibiæ with base and a central annulation black; antennæ and rostrum piceous. The body both above and beneath is thickly and coarsely punctate.

Length 8 to 9; width between pronotal angles 7 to 9 millim.

Hab. Sikhim. Assam; Margherita, Nága Hills (*Doherty*). Burma; Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—The species was originally described from Java.

268. **Æschrocoris tuberculatus**, *Stål* (Æschrus), *Ann. Soc. Ent. Fr.* 1865, p. 169.

Allied to *Æ. obscurus*, but paler in hue; head rather shorter, disk of pronotum bituberculate and the lateral pronotal angles shorter; pronotum with a median longitudinal ridge and two transverse ridges on disk; apices of the pronotal lateral angles emarginate and furnished with a small tubercle in the centre; scutellum terminating in a concolorous tubercle.

Length 6 to $7\frac{1}{2}$; breadth between pronotal angles 6 to 7 millim.

Hab. Sikhim. Gáro Hills (*Chennell*), Nága Hills (*Doherty*). Burma; Karennee, Bhamo, Palon (*Fea*).

269. **Æschrocoris ceylonicus**, *Dist. A. M. N. H.* (7) iv, p. 439 (1899).

Head black with coppery reflections; pronotum, scutellum, and corium ochraceous, sparingly and very coarsely darkly punctate: pronotum with the dark punctures somewhat confluent on the anterior area, the lateral angles strongly produced, slightly curved backward, extreme apex finely acute, the apex and margins blackish; scutellum with a somewhat large black foveate spot in each basal angle; membrane pale brownish, the veins black; body beneath and legs dark ochraceous, sparingly and coarsely blackly punctate; head, pronotal angles beneath, central longitudinal area of abdomen, bases, apices, and a subcentral annulation to femora, bases and a central annulation to tibiæ, black.

Length 6; breadth between pronotal angles 5 millim.

Hab. Ceylon (*Green*).

A species to be distinguished by the peculiar pronotal angles.

Division *EUSARCOCORIARIA*.

This division includes a group of genera in which the scutellum is always broad, sometimes short and broad, or, as in *Sepontia*, extending to the apex of the abdomen; and with the exception of *Cratonotus*, a genus somewhat difficult to locate, the body also is short and broad, the lobes of the head are about equal in length, or very slightly varying in this respect, the lateral lobes never meeting in front of the central lobe as in some preceding divisions.

Synopsis of Genera.

I. Body short and broad, its length much less than twice breadth of pronotum.
 A. Scutellum reaching apex of abdomen.... SEPONTIA, p. 164.
 B. Scutellum more than half the length of abdomen.
  a. Head broad, not acuminate.
   α. Scutellum but little narrowed on posterior half, almost as long as corium EUSARCOCORIS, p. 165.

b. Scutellum distinctly apically narrowed and distinctly shorter than corium .. CARBULA, p. 170.
b. Head long, tapering, acuminate .... HERMOLAUS, p. 169.
II. Body long, about twice as long as breadth of pronotum.
C. Scutellum only about half the length of abdomen .... CRATONOTUS, p. 173.

Genus SEPONTIA.

Sepontia, *Stål, Hem. Afr.* i, p. 133 (1864); *id. En. Hem.* v, p. 80 (1876).
Cænina, *Walk. Cat. Het.* i, p. 82 (1867).

Type, *S. misella*, Stål, an African species.

Distribution. Ethiopian, Oriental, and Eastern Palæarctic Regions.

Body obovate, very convex above and beneath; head depressed anteriorly, almost perpendicularly, lobes of equal length or central lobe slightly prominent; rostrum reaching the third or fourth abdominal segment; antennæ five-jointed, basal joint not reaching the apex of head; pronotum strongly deflected anteriorly; scutellum large, convex, extending to the apex of the abdomen, the lateral areas of the corium only exposed.

270. **Sepontia stigmatica**, *Dist. A. M. N. H.* (7) iv, p. 439 (1899).

Ochraceous, somewhat thickly and darkly punctate; head, a wide anterior collar to the pronotum (sometimes divided at the centre into two large transverse subquadrate spots), and a large triangular spot at base of scutellum bronzy-black; antennæ ochraceous, apical joints darkest (somewhat variable in this respect); scutellum with a small ochraceous levigate spot on basal margin at each side of the dark triangular spot: body beneath blackish; marginal spots at sternal segmental incisures, apex of abdomen, a narrow macular lateral abdominal margin, rostrum, and legs ochraceous.

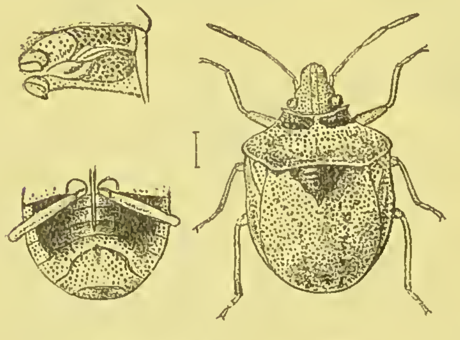

Fig. 99.—*Sepontia stigmatica.*

Var. Scutellar basal black spot continued by two narrow fasciæ to apex.

Length 4 to $4\frac{1}{2}$ millim.

Hab. Ceylon (*Lewis*).

271. **Sepontia variolosa**, *Walk.* (Cænina) *Cat. Het.* i, p. 82 (1867).

Ochraceous, thickly brownly punctate; head, anterior area of pronotum, basal margin of scutellum, and body beneath dark brassy-green; a small spot in front of each eye, and the lateral and anterior margins of the pronotum levigate ochraceous; two central spots on anterior area of pronotum, three at basal margin of scutellum, legs, antennæ, and a series of small marginal spots to abdomen, luteous; bases of femora brassy-green; a subtriangular discal castaneous spot to scutellum.

Length 3 millim.

Hab. Burma (*Mrs. Waring*, *Brit. Mus.*).

Genus EUSARCOCORIS.

Eysarcoris, *Hahn, Wanz.* ii, p. 66 (1834).
Eysarcocoris, *Stål, Hem. Afr.* i, p. 135 (1864).
Eusarcoris, *Puton, Cat.* 1866, p. 11.
Analocus, *Stål, Öfv. Vet.-Ak. Förh.* 1872, No. 3, p. 36.
Stollia, *Ellenried. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 149 (1862); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 510.

Type, *E. aëneus*, Scop., a Palæarctic species.

Distribution. Palæarctic, Ethiopian, Oriental, and Australian Regions.

Body obovate, moderately broad and somewhat strongly convex beneath; head deflected, its apex rounded, the central lobe either as long as lateral lobes or slightly prominent; antennæ with the basal joint not reaching or nearly reaching the apex of head; pronotum anteriorly deflected; scutellum about as long as its breadth at base, or a little longer, frena not extending beyond its middle.

a. *Pronotal angles more or less prominent.*

272. **Eusarcocoris guttiger**, *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 32, t. 2, f. 47 (1783); *Stål* (Stollia), *En. Hem.* v, p. 81 (1876); *Dall. List Hem.* i, p. 228 (1851).
Pentatoma nepalensis & punctipes, *Westw. in Hope Cat.* i, p. 36 (1837).

Obscure luteous, thickly punctured with bronzy-black, the punctures nearly confluent on the head, anterior area of the pronotum, and lateral angles of the pronotum; extreme lateral margins of the pronotum, a somewhat large spot near each basal angle of the scutellum, and the apical margin (narrowly) of the same, levigate, luteous; antennæ ochraceous, apical joint (excluding base) piceous: body beneath and legs ochraceous and blackly punctate; central area of sternum black, opaque; abdomen (excluding lateral and apical margins) shining black. Lateral angles of the pronotum obtusely prominent.

Var. In some specimens the levigate angular spots at base o scutellum are very small or practically obsolete.

Length $5\frac{1}{4}$ to $5\frac{1}{2}$; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Sikhim. Nága Hills (*Doherty*). Bombay (*Leith*). Calcutta (*Ind. Mus.*). Ceylon (*Green*). Burma; Bhamo, Karennee, Palon (*Fea*), Minhla (*Comotto*). Tenasserim; Plapoo, Malewoon (*Fea*).—Reported from China, and common in Japan.

273. **Eusarcocoris montivagus**, sp. n.

Allied to *E. guttiger*, but differing by the more produced pronotal angles, the narrower and more laterally sinuate scutellum, the abdomen beneath with a central angulate fascia, not the whole disk, brassy-black; apical joint of antennæ brownish-ochraceous, not

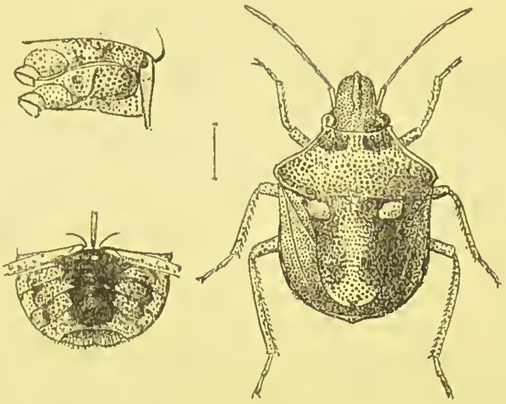

Fig. 100.—*Eusarcocoris montivagus.*

piceous; central lobe of head usually defined by a levigate ochraceous line; the lateral margins of scutellum more or less brassy-black.

Length 5 to $5\frac{1}{2}$; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.

Hab. Sikhim. Assam: Gáro Hills (*Chennell*); Nága Hills (*Doherty*); Margherita (*Ind. Mus.*). Pegu (*Coll. Dist.*).

274. **Eusarcocoris aënescens**, *Walk.* (Hoplistodera) *Cat. Het.* ii, p. 266 (1867).

Much resembling the preceding species *E. montivagus*, but the lateral angles of the pronotum acute with their apices very slightly recurved; sternum beneath somewhat confluently punctured with brassy-black, abdomen marked as in *E. guttiger*; apical joints of the antennæ, excluding base, piceous.

Var. In some specimens the head is brassy-green, in others brassy-black.

Length $6\frac{1}{2}$; breadth between pronotal angles 6 millim.

Hab. Tenasserim; Myitta (*Doherty*).—The type was from Borneo.

275. **Eusarcocoris rosaceus,** *Dist. Tr. E. S.* 1901, p. 109.

Ochraceous, thickly and darkly punctate, finely and very thickly on head, more coarsely and sparingly on pronotum, scutellum, and corium; head with a central pale levigate longitudinal line not quite reaching apex; antennæ ochraceous; pronotum with the anterior and lateral margins palely levigate, the lateral angles rosaceous, two clusters of dark punctures on each side of the anterior area; scutellum with a large rounded pale levigate spot near each basal angle; membrane pale brownish hyaline: body beneath ochraceous, thickly and darkly punctate; abdomen with a broad central greenish-black fascia, its lateral margins somewhat paler, with the stigmata and a series of small marginal spots black; legs ochraceous, finely spotted with black. Head long, almost as long as pronotum, which has the lateral angles strongly and robustly produced, their apices broadly subacute.

Length 6 to 6½; breadth between pronotal angles 5 to 5½ millim.

Hab. Burma; Karennee (*Fea*).

b. *Pronotal angles not prominent.*

276. **Eusarcocoris ventralis,** *Westw.* (Pentatoma) *in Hope Cat.* i, p. 36 (1837).
Eysarcoris distacta, *Dall. List Hem.* i, p. 226 (1851); *Atk.* (Stollia) *J. A. S. B.* lvii, p. 40 (1888).

Brownish-ochraceous, somewhat thickly darkly punctate, anterior area of the pronotum luteous, sparsely darkly punctate and with two large transverse brassy-black spots; head brassy-black; lateral margin of pronotum and a somewhat large rounded spot near each basal angle of the scutellum levigate, luteous; apex of scutellum sometimes margined with black punctures: body beneath and legs ochraceous, darkly punctate; central disk of abdomen brassy-black; antennæ ochraceous, with the apical joint brownish-ochraceous.

Length 5½ to 6½; breadth between pronotal angles 4 to 4½ millim.

Hab. Ranchi; Bombay (*Leith*). Calcutta (*Ind. Mus.*); Bangalore. Burma; Teinzo, Yenangyoung, Bhamo (*Fea*).—Also received from the Malay Peninsula.

277. **Eusarcocoris inconspicuus,** *Herr.-Sch.* (Pentatoma) *Wanz. Ins.* vii, p. 93 (1844).
Eysarcoris misella, *Stål, Hem. Afr.* i, p. 135 (1864).
Eysarcoris epistomalis, *Muls. & Rey, Pun. Fr.* p. 177 (1866).
Eysarcoris pusillus, *Costa, Cim. Cent. Sec.* decas 6–10, p. 24 (1847).
Eusarcoris pseudoaeneus, *Jakowl. Hor. Soc. Ent. Ross.* vi, p. 117 (1869).
Var. Eysarcoris simplex, *Puton, Synops.* ii, p. 55 (1881).

Luteous, thickly brownly punctate; anterior half of pronotum much paler and containing two bronzy-green transverse spots;

head bronzy-green, thickly punctate; a levigate luteous spot near each basal angle of the scutellum: body beneath, legs, antennæ, and rostrum luteous; abdomen with a broad central bronzy-black fascia: pronotal angles subprominent but not produced.

Length 5; breadth between pronotal angles 3½ millim.

Hab. North-west India (*Brit. Mus.*).—Also found generally in the Palæarctic Region, in South Africa, and recorded from the Philippines.

278. **Eusarcocoris sindellus**, sp. n.

Ochraceous, thickly darkly punctate; head brassy-black, with the apical margins and a central fascia ochraceous; two transverse spots with their apical areas brassy-black on anterior area of pronotum; a small levigate luteous spot near each basal angle of scutellum, which is somewhat elongate and gradually narrowed posteriorly; antennæ with the apical joint infuscated: body beneath and legs ochraceous, finely punctate; abdomen with a broad central brassy-black or castaneous fascia, narrowing posteriorly; rostrum just passing the intermediate coxæ, its apex piceous.

Length 5 to 5½; breadth between pronotal angles 3½ millim.

Hab. Sind (*Coll. Dist.*).

A species allied to *E. inconspicuus*, Herr.-Sch., and *E. scutellaris*, Jakowl., both Palæarctic species *.

279. **Eusarcocoris dubius**, *Dall. List Hem.* i, p. 227 (1851); *Dohrn, Stett. ent. Zeit.* xxi, p. 400 (1860); *Stål* (Stollia), *En. Hem.* v, p. 82 (1876).

Brownish-ochraceous, thickly punctate; head and two large transverse spots on anterior area of pronotum bronzy-black; pronotum with the lateral angles subprominent, but not produced; a somewhat obscure levigate ochraceous spot near each basal angle of the scutellum; anterior lateral margin of the pronotum narrowly levigate: body beneath bronzy-black; posterior sternal segmental margins, coxæ, legs, and lateral margins of abdomen brownish-ochraceous, legs with black punctures; rostrum reaching the posterior coxæ: antennæ ochraceous, with the two apical joints infuscated.

Length 6½; breadth between pronotal angles 4 millim.

Hab. Berhampur (*Atkinson*). Tenasserim (*Packman*).

* This is another instance showing, as Mr. Blanford has recently proved by the distribution of Vertebrates, that Sind is a Palæarctic province (see Phil. Trans. Roy. Soc. 1901, vol. 194, p. 432). M. Oschanine with reference to Hemiptera has also remarked: "Il me paraît probable que la faune de l'extrême NO de l'Inde, c'est-à-dire celle du Sindh, doit être adjointe à notre région" ("Sur les Limites et les Subdivisions de la Région paléarctique, basées sur l'Étude de la Faune des Hémiptères," Congr. Zool. 1892, ii. p. 278).

280. **Eusarcocoris capitatus**, sp. n.

Brownish-ochraceous, thickly and rather finely punctate; pronotum tinged with castaneous, the anterior and lateral marginal edges, and a round spot on anterior area, fasciately connected with lateral margins, ochraceous, darkly punctate; head elongate and somewhat narrow, much as in the genus *Sepontia*, but not prominently deflected; scutellum broad, much as in *E. montivagus*, but shorter, the basal area usually distinctly darker in hue; corium sparingly and coarsely punctate, basal lateral margins pale ochraceous: body beneath brownish-ochraceous, darkly punctate; central area of meso- and metasterna, and a broad central fascia to abdomen, narrowed posteriorly, black; central area and base of under surface of head luteous, levigate; rostrum just passing the posterior coxæ, its apex piceous; antennæ luteous, fourth and fifth joints brownish-ochraceous; lateral angles of pronotum subprominent, rounded, with a small nodule near apex.

Length 4; breadth between pronotal angles 3 millim.

Hab. Calcutta.

Atkinson (J. A. S. B. 1888, p. 39) also enumerates *E. rugulosus*, Walk. (Cat. Het. ii, p. 276, 1867), as belonging to the fauna of British India. The unique type of Walker's species cannot, however, now be found in the Collection of the British Museum, and without the type or typical specimens his species must be treated as non-existent. Walker's names can only be accepted as authoritative when his types can be referred to; his descriptions unfortunately are nearly always useless.

Genus **HERMOLAUS**, nov.

Type, *H. typicus*, Dist.

Distribution. Brit. India.

Head long, narrow, tapering anteriorly; central lobe somewhat raised and prominent, its apex slightly projecting beyond the lateral lobes; lateral areas deflected, lateral margins slightly sinuate in front of eyes; antennæ five-jointed, basal joint not reaching apex of head. Rostrum long, reaching the fourth abdominal segment; second joint shorter than third and fourth together. Pronotum anteriorly deflected, anterior margin concave, centrally truncate, lateral angles subprominent. Scutellum broad, a little more than half the length of abdomen, narrowed about centre, its apex broadly rounded; corium somewhat short, its apical angle extending but little beyond apex of scutellum; membrane a little longer than abdomen.

281. **Hermolaus typicus**, sp. n.

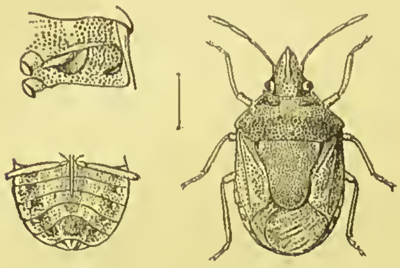

Fig. 101.—*Hermolaus typicus.*

Brownish-ochraceous, thickly punctate, the anterior area of pronotum and the scutellum paler in hue; head somewhat fuscous; antennæ luteous, apical joint a little darker; anterior area of pronotum with two transverse brownish spots; abdomen above castaneous; connexivum luteous, spotted with castaneous; scutellum with a minute levigate spot near each basal angle: body beneath and legs luteous, body punctured with castaneous, most thickly so on lateral areas; abdomen with a broad maculate central pale castaneous fascia; apex of rostrum piceous.

Length 5; breadth between pronotal angles $2\frac{1}{2}$ millim.

Hab. Nilgiri Hills; Ootacamund (*Atkinson, Brit. Mus.*).

Genus CARBULA.

Carbula, *Stål, Hem. Afr.* i, p. 140 (1864); *id. En. Hem.* v, pp. 60 & 82 (1876).

Type, *C. decorata*, Sign., an African species.

Distribution. Ethiopian and Oriental Regions.

Body broadly oval or obovate, beneath convex. Head rounded or somewhat truncated at apex, lobes about equal in length; rostrum with the first joint equal to or extending a little beyond the bucculæ, second joint about equal to or a little longer than the last two joints taken together; antennæ with the first joint not reaching the apex of the head. Pronotum with the anterior lateral margins generally obtuse, never acute, terminated by a levigate edge which is rarely crenulated; scutellum broad, triangular, a little longer than broad at base; connexivum moderately exposed.

a. *Lateral angles of the pronotum prominent, sometimes acutely produced.*

282. **Carbula crassiventris**, *Dall.* (Pentatoma) *Tr. E. S.* v, p. 189 (1849).

Brownish-ochraceous, thickly and coarsely punctate; antennæ, rostrum, body beneath, and legs ochraceous; body and legs blackly

punctate ; apex of rostrum, a central spot (more or less distinct) on each of the two terminal abdominal segments, the stigmata and small marginal spots, black; lateral abdominal margins distinctly paler ; anterior lateral margins of the pronotum luteous, levigate, inwardly margined with black punctures ; pronotal angles broadly produced, their apices obtuse and slightly paler and levigate ; rostrum just passing the posterior coxæ.

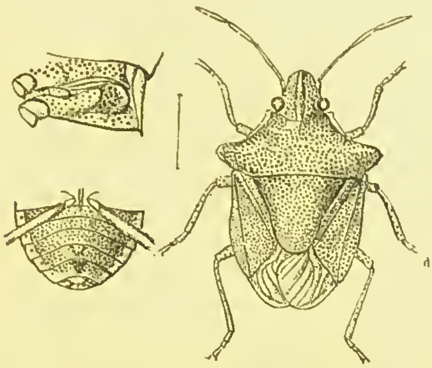
Fig. 102.—*Carbula crassiventris.*

Length 8; breadth between pronotal angles 6 millim.

Hab. Bhutan (*Brit. Mus.*). Nága Hills (*Doherty*). Burma; Rangoon, Karennee, Mt. Mooleyit (*Fea*). West Yunnan (*Coll. Dist.*).

283. **Carbula indica,** *Westw.* (Pentatoma) *in Hope Cat.* i, p. 42 (1837).
Carbula fusca, *Dist. Tr. E. S.* 1887, p. 346.

Allied to *C. crassiventris*, Dall., but with the pronotal angles less produced and more or less concave beneath, their apices broadly subacute ; rostrum reaching the third abdominal segment ; abdomen beneath with a broad central black fascia with its margins notched.

Length 7 to 8 ; breadth between pronotal angles 5 to 6 millim.

Hab. Nepal. Sikhim ; Darjiling, Kurseong (*Ind. Mus.*).

284. **Carbula rugulosa,** sp. n.

Ochraceous, thickly and darkly punctate, head and lateral angles of the pronotum somewhat brassy-black; pronotum with the lateral angles obtusely prominent, with a central longitudinal carinate line, and on the anterior half with some rugulose and reticulate elevated lines; corium interiorly somewhat levigately rugulose; membrane fuliginous: body beneath, antennæ, rostrum, and legs luteous ; body and legs blackly punctate ; fifth and sixth abdominal segments each with a large central brassy-black spot ; rostrum reaching posterior coxæ, its apex piceous.

Length 7 to 8 : breadth between pronotal angles 4 to 4½ millim.

Hab. Nilgiri Hills ; Ootacamund (*Atkinson*, *Brit. Mus.*).

Allied to *C. indica*, Westw., but differing by the lateral lobes of the head being slightly longer than the central, by the rugulose markings to the pronotum and corium, and by less prominent pronotal angles.

285. **Carbula producta**, *Distr. Tr. E. S.* 1901, p. 110.

Ochraceous, coarsely punctate; head very thickly and darkly punctate, the apex of the central lobe ochraceous; antennæ with the first, second, and third joints ochraceous, fourth and fifth black with their bases ochraceous; pronotum coarsely and darkly punctate, the lateral angles black, anterior lateral margins luteous, levigate; scutellum coarsely and darkly punctate, with a small levigate luteous spot in each basal angle; corium more thickly punctate and slightly rugulose, basal lateral margin luteous, levigate; membrane pale hyaline: body beneath and legs ochraceous; lateral areas of the sternum and abdomen with scattered dark punctures; stigmata and an abdominal lateral marginal series of small spots, black; legs finely black-spotted. Head somewhat narrow, long, and tapering; lateral angles of pronotum strongly and robustly produced.

Length 7½ to 8; breadth between pronotal angles 6 millim.

Hab. Burma; Karennee (*Fea*).

286. **Carbula scutellata**, *Dist. Tr. E. S.* 1887, p. 347.

Luteous, coarsely brownly punctate; antennæ luteous, somewhat infuscated at apex; pronotum with the lateral margins levigate, the lateral angles produced into long acute black spines; scutellum luteous, sparingly and coarsely darkly punctate, the punctures usually thickest at lateral margins and sometimes at base, a large spot at each basal angle and the apex impunctate, corium usually with a purplish tinge; membrane pale hyaline; connexivum luteous with black spots: body beneath and legs luteous, with a few scattered black punctures on disk and femora; the margins and apices of the under surface of pronotal angles black.

Length 8: breadth between pronotal angles 5½ millim.

Hab. North Khási Hills (*Chennell*); Bombay (*Leith*). Burma; Moulmein (*Fea*).

287. **Carbula socia**, *Walk.* (Mormidea) *Cat. Het.* ii, p. 262 (1867).
Mormidea similis, *Kirby, J. Linn. Soc. Zool.* xxiv, p. 82 (1891).

Allied to the preceding species *C. scutellata*, but differing by the pronotal angles, which are much more obtuse; head broader and less narrowed anteriorly, scutellum more thickly punctate, &c.

Length 8; breadth between pronotal angles 5 millim.

Hab. Bombay (*Leith*). Ceylon (*Lewis*).

288. **Carbula biguttata**, *Fabr.* (Coreus) *Ent. Syst.* iv, p. 129 (1794); *Stål, Hem. Fabr.* i, p. 25 (1868); *id. En. Hem.* v, p. 83 (1876).
Cimex binotatus, *Fabr. Syst. Rhyng.* p. 165 (1803).
Pentatoma obscura, *Westw. in Hope Cat.* i, p. 35 (1837); *Dist.* (Carbula) *P. Z. S.* 1900, p. 812.

Above dark brownish-ochraceous and thickly and darkly punctate; anterior lateral margins of pronotum and basal lateral

margins of corium bright reddish-ochraceous; lateral angles of pronotum broadly black, their apices subacute and very slightly directed backward: a luteous levigate spot at each basal angle of scutellum; abdomen above bluish-black, connexivum reddish-ochraceous spotted with black: body beneath, antennæ, legs, and rostrum ochraceous; apex of rostrum and disk of abdomen piceous; lateral areas of sternum and abdomen somewhat thickly blackly punctate; lateral margins of pro- (excluding lateral angles), meso-, and metasterna ochraceous.

Length $8\frac{1}{2}$: breadth between pronotal angles 5 millim.

Hab. N.W. Himalaya (*Coll. Dist.*). Bombay (*Leith*).

b. *Lateral angles of the pronotum subprominent, rounded.*

289. **Carbula insocia**, *Walk.* (Eysarcoris) *Cat. Het.* iii, p. 556 (1868); *Dist. P. Z. S.* 1900, p. 812.
Pentatoma bimaculata, *Westw. in Hope Cat.* i. p. 35 (1837).

Brownish-ochraceous, thickly, finely, and darkly punctate; a small luteous levigate spot at each basal angle of the scutellum; antennæ, anterior lateral margins of the pronotum, basal lateral margins of the corium, connexivum, body beneath, and legs, ochraceous; connexivum spotted with black: body beneath blackly punctate, the punctures very thick on the under surface of the pronotal lateral angles; disk of abdomen with a more or less continuous broad black fascia which narrows posteriorly; lateral margins of abdomen with a series of small black spots at apices of incisures; rostrum reaching posterior coxæ, its apex black.

Length 8; breadth between pronotal angles 5 millim.

Hab. N.W. Himalaya (*Coll. Dist.*). Bombay (*Leith*). Bangalore (*Ind. Mus.*).

Genus CRATONOTUS.

Cratonotus, *Dist. A. M. N. H.* (5) iii, p. 50 (1879).

Type, *C. coloratus*, Dist.

Distribution. Oriental Region.

Head broad, about as long as broad, lateral margins moderately sinuate and reflexed, the lateral lobes a little longer than the central and broadly divided at their apices; antennæ five-jointed, basal joint stout, not reaching apex of head; rostrum just passing posterior coxæ; pronotum twice as broad as long, raised and tumid at base, deflexed in front, lateral angles obtusely prominent, lateral margins sinuated, with their anterior portion crenulate; scutellum about as broad at base as long, gradually narrowed for two-thirds its length and then straightened to apex, which is moderately broad and rounded; membrane with longitudinal nervures; abdomen widened above, connexivum a little exposed on each side, convex beneath; mesosternum centrally carinate.

290. **Cratonotus coloratus**, *Dist. A. M. N. H.* (5) iii, p. 50 (1879).

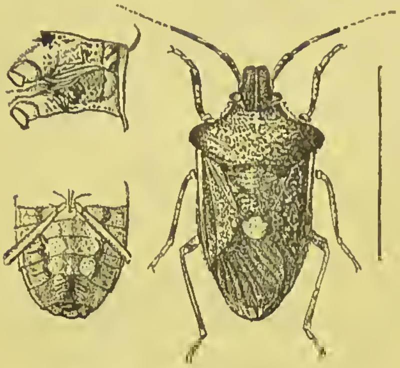

Fig. 103.—*Cratonotus coloratus.*

Dark castanoous, somewhat shining, thickly punctured with black; head black, thickly punctate; antennæ luteous, rostrum brownish; pronotum with the basal half rugulose and very coarsely punctate, lateral margins narrowly luteous, lateral angles piceous; scutellum transversely rugulose, with a large irregular patch at base and the apex broadly luteous; membrane shining, piceous; connexivum and body beneath luteous, the last with a broad olivaceous fascia on each lateral area, two obscure marks on disk and a subapical spot piceous; legs luteous, apices of femora and tibiæ and the tarsi black.

Length 19 to 22; breadth between pronotal angles 11 to 12 millim.

Hab. Sikhim; North Khási Hills (*Chennell*). Burma (*Coll. Dist.*).

Division *HOPLISTODERARIA.*

This division is allied to the preceding one by having the scutellum large, broad, and neither distinctly narrowed to apex nor subtriangular; the mesosternum is either sulcate or carinate, and the pronotal angles spined or rounded; the head and anterior area of the pronotum are usually, sometimes very strongly, deflected; the odoriferous apertures to the metasternum are also longer than in the previous division. Abdomen unarmed at base.

Synopsis of Genera.

A. Mesosternum sulcate.
- a. Pronotal angles strongly and prominently produced.
  - *a.* Head and anterior area of pronotum perpendicularly deflected .... ALCIMOCORIS, p. 175.
  - *b.* Head and anterior area of pronotum obliquely deflected .... HOPLISTODERA, p. 176.

B. Mesosternum carinate.
- b. Pronotal angles strongly produced .... PARACRITHEUS, p. 178.
- c. Pronotal angles rounded, not produced. In the male anterior angles of rostral canal spinously produced downwards .. AXIAGASTUS, p. 179.

Genus ALCIMOCORIS.

Alcimus, *Dall. List Hem.* i, p. 218 (1851); *Stål, En. Hem.* v, p. 61 (1876) (nom. præocc.).
Alcimocoris, *Bergr. Rev. d'Entom.* t. x, p. 214 (1891).

Type, *A. lineolatus*, Dall., a species found in the Philippine Islands.

Distribution. Oriental Region, China and Japan.

Anterior area of the pronotum and the head perpendicularly deflected; lateral pronotal angles strongly produced, directed a little upwardly, with their apices slightly recurved and strongly carinated beneath; scutellum broad, long, nearly reaching the apex of the body; mesosternum sulcated; femora with their apices somewhat tumescent; tibiæ distinctly furrowed above; rostrum reaching the posterior coxæ, second joint about as long as the third and fourth joints together; head with the lateral margins strongly sinuate before the eyes, the apex of the central lobe a little in advance of the lateral lobes; antennæ five-jointed, the basal joint short and stout, not reaching the apex of the head.

291. **Alcimocoris coronatus**, *Stål* (Alcimus), *En. Hem.* v, p. 88 (1876).

Above ochraceous, very coarsely and thickly punctured with black; lateral pronotal angles levigate, margined anteriorly by a ridge which is abbreviated near the apex; head more finely punctate, with a central subbasal spot and an angulated line on each side beginning at the eyes ochraceous; pronotum with the

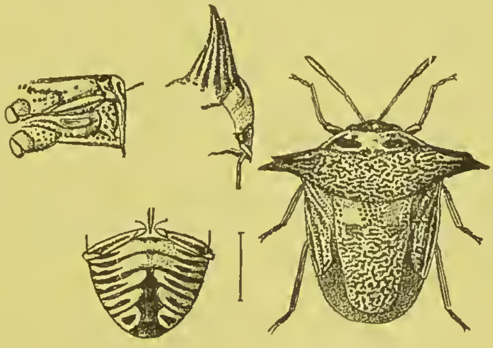

Fig. 104.—*Alcimocoris coronatus.*

anterior area ochraceous, levigate, containing two transverse curved and angulated black spots; scutellum with a long levigate ochraceous spot near each basal angle; sternum and legs black, streaked and spotted with ochraceous; abdomen ochraceous, the ventral incisures, stigmatal streaks, and a central longitudinal fascia (more or less broken) black.

Length 8 to 9; breadth between pronotal angles 10 millim.
Hab. Deccan (*Stockholm Mus.*). Burma; Teinzo, Bhamo, Karennee (*Fea*).

292. **Alcimocoris flavicornis**, *Dist.* (Alcimus) *Tr. E. S.* 1887, p. 349.

Ochraceous, thickly and coarsely blackly punctate; head black, with three anterior lines and three small subbasal spots, ochraceous; anterior area of the pronotum black, sublevigate, with its lateral margins and three irregularly-shaped central spots ochraceous; pronotal angles strongly produced, their apices ochraceous, acutely pointed, extreme tips black; scutellum with two large levigate ochraceous spots near basal angles, and with some irregular longitudinal linear ochraceous markings; head beneath and prosternum as above, with two fused ochraceous spots on each side of eyes, apices of pronotal angles ochraceous as above; remaining under surface of the body ochraceous, the sutures, lateral streaks, and a central abdominal fascia black; rostrum and legs dark castaneous, femora more or less streaked with ochraceous.

Length 8 to 9; breadth between pronotal angles 10 to 12 millim.
Hab. Sikhim.

293. **Alcimocoris parvus**, sp. n.

Ochraceous, darkly but somewhat sparingly punctate; pronotal angles each with a strong groove with raised black margins on its upper surface, their apices sinuate, bidentate; the posterior tooth ochraceous; anterior lateral margins of pronotum, a spot behind each eye, some indistinct pronotal spots, a spot near each basal angle of scutellum, and a small spot on apical disk of corium, ochraceous, levigate; lateral margins of head and margins of central lobe piceous; two transverse angulated piceous spots on anterior area of pronotum; membrane fuliginous; antennæ brownish-ochraceous: body beneath and legs ochraceous, the body thickly and darkly punctate; sixth abdominal segment with a central piceous spot; rostrum ochraceous, its apex piceous.

Length 6; breadth between pronotal angles $6\frac{1}{2}$ millim.
Hab. Nága Hills (*Doherty*).

Genus HOPLISTODERA.

Hoplistodera, *Westw. in Hope Cat.* i, p. 18 (1837); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 510.

Type, *H. testacea*, Westw., a Javan species.
Distribution. Oriental Region.

Head and anterior area of pronotum obliquely, not perpendicularly, deflected; otherwise differing from the preceding genus (*Alcimocoris*) by the pronotal spines being acuminate, scutellum shorter, membrane larger or more exposed, with longitudinal veins; corium about as long as scutellum.

294. **Hoplistodera incisa,** *Dist. Tr. E. S.* 1887, p. 349, pl. 12, f. 3.

Ochraceous with brownish tints; head finely and sparingly punctate; antennæ ochraceous, becoming darker towards apex; pronotum sparingly but coarsely punctate, the lateral angles produced in robust subacute spines, their apices slightly reflexed

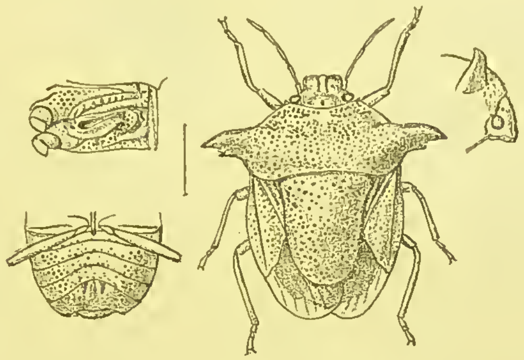

Fig. 105.—*Hoplistodera incisa.*

backward, and with a notched tubercle beneath at about half their length; scutellum with the basal half sparingly, the apical half thickly coarsely punctate; corium coarsely and irregularly punctate; membrane pale hyaline: body beneath ochraceous, with a sublateral series of castaneous spots on each side; legs pale luteous, femora annulated with brown near apex; rostrum ochraceous, the apex pitchy and extending a little beyond posterior coxæ.

Length 8; breadth between pronotal angles 9 millim.

Hab. Sikhim; Mungphu. Nága Hills (*Doherty*). Burma; Karennee (*Fea*).

295. **Hoplistodera virescens,** *Dall. List Hem.* i, p. 217 (1851).

Head orange-yellow, brownish towards the vertex, which is sparingly punctate; pronotum pale yellowish-green, moderately strongly punctate, with two ochraceous spots near anterior margin; lateral spines nearly horizontal, acute; scutellum testaceous, basal portion sparingly, apical more thickly, punctate, base with four brown spots; corium yellowish-green, finely and sparingly brownly punctate; membrane pale hyaline; abdomen beneath concolorous, somewhat thickly punctate, the punctures brown on each side of disk and towards apex; sternum pale ochraceous and thickly punctate; legs ochraceous, apices of tibiæ and basal joints of tarsi brownish; antennæ and rostrum ochraceous, two apical joints of the first fulvous, and apex of the second black.

This description agrees with that of Dallas, and refers to fresh specimens; ordinary examples are of a uniform ochraceous hue both above and beneath.

Length 8; breadth between pronotal angles 7 millim.

Hab. Sikhim. Nága Hills (*Chennell*). Burma; Ashwe Keba, Karennee (*Fea*).—Also taken by Anderson in West Yunnan.

296. **Hoplistodera recurva**, *Dist. Tr. E. S.* 1900, p. 170, pl. ii, f. 9.

Ochraceous, coarsely, sparingly, and darkly punctate; head with some basal castaneous spots; pronotum with two anterior discal subfoveate spots, a central submarginal spot, and a spot at base of posteriorly produced angles castaneous; scutellum paler ochraceous on basal half, where there are four castaneous fasciæ, two central and one near each lateral margin; membrane pale obscure hyaline; body beneath ochraceous; sternum sparingly, coarsely, and darkly punctate; prosternum centrally castaneous, meso- and metasterna more or less suffused with castaneous; abdomen with a longitudinal fascia of dark punctures on each lateral discal area; antennæ pale castaneous. The pronotal posterior angles are well produced, moderately recurved, with their apices acute.

Length 8; breadth between pronotal angles 7½ millim.

Hab. Chakrata, North-western Himalayas (*Anderson*).

Genus PARACRITHEUS.

Astyanax, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 511, *nom. præocc.*
Paracritheus, *Bergr. Rev. d'Entom.* x, p. 214 (1891).

Type, *P. trimaculatus*, Lep. & Serv.

Distribution. Oriental Region.

Body broadly obovate; head and anterior area of pronotum moderately deflected; head slightly narrowed forwardly and a little sinuate before the eyes, its apex rounded, punctate in longitudinal series, lobes of equal length; rostrum extending a little beyond the posterior coxæ; basal joint of antennæ not reaching apex of head; pronotum with the lateral angles strongly and acutely produced; scutellum broad, about as long as broad at base, a little narrowed posteriorly; corium about reaching the apex of abdomen, the apical angle rounded; membrane with longitudinal veins; mesosternum carinate; abdomen narrowed at base.

297. **Paracritheus trimaculatus**, *Lep. & Serv.* (Scutellera) *Enc. Méth.* 10, p. 411 (1825); *Germ.* (Graphosoma) *Zeitschr.* i, p. 54 (1839); *Dall.* (Hoplistodera) *List Hem.* i, p. 217 (1851); *Stål* (Astyanax), *Öfv. Vet.-Ak. Förh.* 1870, p. 629.

Ochraceous, thickly brownly punctate; head with six longi-

tudinal series of punctures, two marginal and four discal; pronotum with two darkly-enclosed transverse spots on anterior area, lateral angles pale castaneous and acutely produced; scutellum piceous at base, with a large luteous levigate spot near each basal angle and a similar transverse spot at apex: body beneath and legs ochraceous, punctured with castaneous, a central castaneous spot on apical segment.

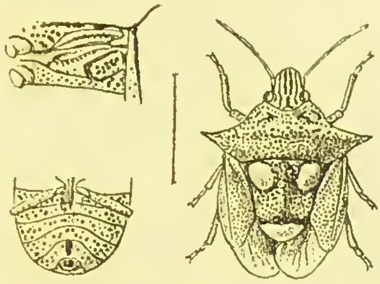

Fig. 106.
Paracritheus trimaculatus.

Length 9; breadth between pronotal angles 9 millim.

Hab. Burma (*Atkinson*).—Common in the Malay Peninsula, and found in many islands of the Malayan Archipelago.

Genus AXIAGASTUS.

Axiagastus, *Dall. List Hem.* i, p. 221 (1851); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 511.

Type, *A. rosmarus*, Dall.

Distribution. Oriental and Australasian Regions.

The principal character relied on by Dallas in the definition of this genus is "anterior angles of the rostral canal produced downwards into long tusk-like spines," which is a good and

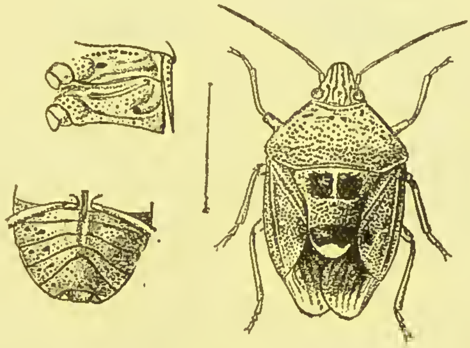

Fig. 107.—*Axiagastus rosmarus.*

sufficient but somewhat sexual character found in its full development in the male; the pronotal angles are rounded, not produced; scutellum about as long as broad at base and nearly two-thirds the length of abdomen; meso- and metasterna prominently ridged; abdomen unarmed at base, but with a more or less well-defined central furrow.

298. **Axiagastus rosmarus**, *Dall. List Hem.* i, p. 222, pl. 8, f. 5 (1851).

Ochraceous, more or less thickly brownly punctate; head with the margins and four discal series of punctures castaneous; pronotum more sparingly punctate on anterior area, the lateral margins piceous; scutellum with the base somewhat levigate, two large black spots on anterior disk and an arcuate black or castaneous spot before apex, which is luteous, levigate; body beneath and legs pale ochraceous; prosternum, abdomen, and legs sparingly punctured with black; stigmata, transverse adjacent streaks, and sternal lateral spots black.

Length 10 to 15; breadth between pronotal angles 9 millim.

Hab. Khási Hills (*Chennell*).—Also received from Siam, Celebes, and Philippines.

Division *ANTESTIARIA*.

In this division the scutellum is broad but somewhat distinctly narrowed towards apex, in this respect differing from the *Hoplistoderaria*; the scutellum is usually as broad at base as long, but when longer always broad, with the apex rounded; the body is obovate, and more or less convex above.

Synopsis of Genera.

A. Mesosternum centrally carinate; head more or less narrowed anteriorly.
  a. Pronotal angles rounded or subprominent, not spinously produced.
    a. Anterior lateral margins of pronotum entire, not callously elevated .... PLAUTIA, p. 180.
    b. Anterior and anterior lateral margins of pronotum elevated and callous .... ANTESTIA, p. 183
  b. Pronotal angles spinously produced.......... ANACA, p. 182.
B. Mesosternum centrally sulcate; head as broad as long, not narrowed anteriorly .... APINES, p. 186.

Genus **PLAUTIA**.

Plautia, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 514; *id. Hem. Fabr.* i, p. 32 (1868); *En. Hem.* v, p. 92 (1876).

Type, *P. fimbriata*, Fabr.

Distribution. Oriental and Australasian Regions; Madagascar.

Body broadly obovate; head rounded at the apex, emarginate in front of eyes, lobes of equal length; rostrum extending beyond the posterior coxæ; first joint of antennæ not reaching apex of head; pronotum with the lateral angles rounded, not prominent; scutellum moderately short and broad, more or less distinctly

narrowed towards apex, about as long as broad at base; mesosternum centrally carinate; abdomen centrally obscurely tuberculate but not spined at base.

299. **Plautia fimbriata**, *Fabr.* (Cimex) *Mant. Ins.* ii, p. 295 (1787); *Dall.* (Pentatoma) *List Hem.* i, p. 251 (1851); *Stål, Hem. Afr.* i, p. 191 (1864).
Pentatoma fimbriolatum, *Herr.-Schäff. Wanz. Ins.* vii, p. 102, f. 768 (1844).
Pentatoma crossota, *Dall. List Hem.* i, p. 252 (1851).
Rhaphigaster rufoviridis, *Walk. Cat. Het.* ii, p. 364 (1867).

Head, pronotum, and scutellum bright pale olivaceous-green, the last with the apical margin narrowly greyish; corium purplish-red, the lateral margin green, and frequently with a more or less well-defined posterior discal spot; membrane fuliginous, darker at base, where there are two brown spots; abdomen above red; body beneath and legs pale greenish; abdomen with the central disk greenish-ochraceous, and with lateral marginal black points

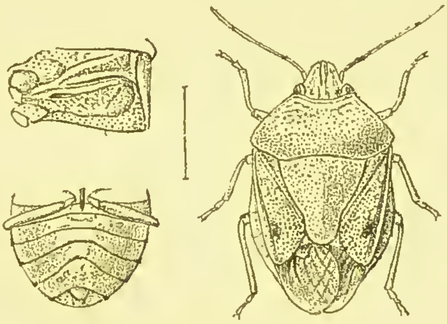

Fig. 108.—*Plautia fimbriata.*

at the apices of the incisures; rostrum greenish-ochraceous with the apex piceous; antennæ greenish-ochraceous, with the apices of the fourth and fifth joints infuscated; the pronotum and scutellum are finely and somewhat sparingly punctate, the corium more thickly punctate.

Length 10 to 11; breadth between pronotal angles 6 to 7 millim.

Hab. Sikhim; North Khási Hills (*Chennell*); Nága Hills (*Doherty*). Bombay (*Leith*). Calcutta (*Ind. Mus.*). Nilgiri Hills (*Hampson*). Ceylon (*Green*). Burma; Bhamo, Teinzo, Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Common throughout the Malay Peninsula and found in most islands of the Malayan Archipelago; also received from China and Japan. This species is also undoubtedly found in Madagascar.

300. **Plautia viridicollis**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 35 (1837).
Pentatoma inconspicua, *Dall. List Hem.* i, p. 250 (1851).

Smaller than *P. fimbriata*, the apex of the scutellum somewhat broadly greyish; pronotum and scutellum with the punctures coarser, corium less thickly punctate, abdomen above violaceous, antennæ darker, &c.

Length 7; breadth between pronotal angles 4 millim.

Hab. Ceylon (*Lewis*). Java (*Oxford Mus.*).

Genus ANACA.

Hyllus, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 513, *nom. præocc.*
Anaca, *Bergr. Rev. d'Entom.* t. x, p. 214 (1891).

Type, *A. florens*, Walk.

Distribution. Oriental Region.

Body broadly obovate; head obliquely deflected, sinuate before the eyes, lobes of about equal length, apex rounded; rostrum extending beyond the posterior coxæ; basal joint of antennæ not reaching apex of head; pronotum with the lateral angles spinously produced; scutellum about as long as broad at base, narrowed towards apex, subtriangular; mesosternum centrally carinate; abdomen neither spined nor tuberculate at base.

301. **Anaca florens**, *Walk.* (Mormidea) *Cat. Het.* ii, p. 263 (1867); *Stål* (Hyllus), *En. Hem.* v, p. 92 (1876).
Hyllus æruginosus, *Hagl. Stett. ent. Zeit.* xxix, p. 160 (1868).

Olivaceous green, anterior area of pronotum and lateral margins of corium a little paler in hue; head reddish-ochraceous, the margins (narrowly) and two central discal lines black; scutellum with a somewhat large pale luteous apical spot; pronotal spines black, a little recurved; body beneath and legs pale greenish, disk of abdomen greenish-ochraceous; lateral abdominal margins with a small black spot at apices of segmental incisures; antennæ greenish-ochraceous, the fourth and fifth joints and apex of the third joint piceous; rostrum ochraceous, with the apex piceous; body above somewhat thickly and coarsely punctate, head and apex of scutellum impunctate.

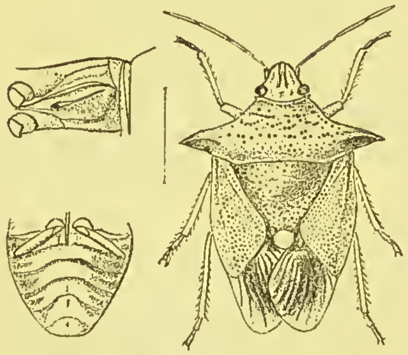

Fig. 109.—*Anaca florens.*

Length 9 to 11; breadth between pronotal angles $7\frac{1}{2}$ to 9 millim.

Hab. Assam; Margherita (*Doherty*). Burma (*Waring*, *Brit. Mus.*). Tenasserim; Malewoon (*Fea*).—Common in the Malay Peninsula and recorded from Siam and some of the islands of the Malayan Archipelago.

302. **Anaca fasciata**, *Dist.* (Hyllus) *A. M. N. H.* (vii) 5, p. 394 (1900).

Olivaceous-green; head, and a broad fascia between the humeral angles of the pronotum and occupying them, dark ochraceous; a pale greenish or ochraceous spot at apex of scutellum; body beneath and legs greenish; pronotal angles beneath with their margins and apices black; disk of abdomen ochraceous, the lateral margins with small black spots at apices of incisures; antennæ greenish ochraceous, second joint shorter than third, fourth and fifth subequal in length; pronotal angles robust, slightly recurved, their apices and lateral margins black.

Length $9\frac{1}{2}$; breadth between pronotal angles 8 millim.

Hab. Assam; Sibságar (*Coll. Dist.*). Ceylon (*Green*).

Genus ANTESTIA.

Antestia, *Stål, Hem. Afr.* i, p. 200 (1864).
Otantestia, *Bredd. Stett. ent. Zeit.* 1900, p. 324.

Type, *A. maculata*, Dall., an African species.

Distribution. Ethiopian, Oriental, and Australasian Regions.

Body obovate; head moderately deflected, lobes of equal length; rostrum passing the posterior coxæ; first joint of antennæ almost reaching apex of head; anterior and anterior lateral margins of pronotum distinctly elevated and callous, lateral angles rounded or subprominent; scutellum broad, about as broad as long at base, narrowed towards apex, subtriangular; mesosternum centrally carinate; abdomen unarmed at base.

This genus contains species recorded as destructive to coffee-trees both in the Ethiopian and Oriental Regions.

a. *Lateral angles of the pronotum not prominent, more or less rounded.*

303. **Antestia anchora**, *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 47, t. 2, f. 60 (1783); *Dall.* (Pentatoma) *List Hem.* i. 254 (1851); *Stål, En. Hem.* v, p. 96 (1876).

Pentatoma cruciata, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 154 (1862).

Strachia pardalis & platyspila, *Walk. Cat. Het.* ii, pp. 330 & 337. n. 64 & 78 (1867).
Antestia ellenriederi, *Bredd. Stett. ent. Zeit.* 1900, p. 322.

Orange-yellow; head with the basal margin, a lineate spot before each eye, and two discal lines black; pronotum with the anterior, anterior lateral, and central basal margins, and two lateral discal suffusions luteous, a transverse black spot on each side of anterior margin and four discal spots of the same colour; scutellum with a streak near each basal angle and the apex luteous; basal angles, two spots on anterior margin, and two angulated spots on apical half black; corium with three discal black spots; connexivum luteous with black spots; membrane fuliginous, with the apical margin greyish: body beneath luteous, with discal transverse, sublateral quadrate, and marginal lineate black spots, sometimes the discal transverse spots are broken internally; head beneath and legs orange-yellow; apex of rostrum black; antennæ black, first and second joints and base of third joint rufous.

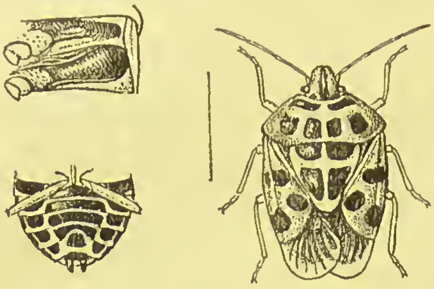

Fig. 110.—*Antestia anchora.*

Length 10 to 12; breadth between pronotal angles 7 to 7½ millim.

Hab. Sikhim; North Khási Hills (*Chennell*); Nága Hills (*Doherty*). Burma; Bhamo, Karennee (*Fea*). Tenasserim, Thagata (*Fea*), Myitta (*Doherty*).—Common in the Malay Peninsula and found in Java and Sumatra.

304. **Antestia pulchra**, *Dall.* (Pentatoma) *List Hem.* i, p. 253 (1851).
Strachia heterospila, *Walk. Cat. Het.* ii, p. 331. 65 (1867).

Head and corium orange-yellow, pronotum and scutellum luteous; head with a spot before each eye, a large basal spot and a smaller subapical spot black; pronotum with two transverse linear spots near anterior margin, a spot at each lateral angle, and two large central spots extending over base of scutellum, black; scutellum with two elongate discal black spots; corium with a central waved and much angulated black fascia; membrane black, its apical margin pale greyish: body beneath luteous; two spots on each lateral area of pro- and mesosterna, three spots on lateral area of metasternum, large transverse spots on each lateral area of first to fifth abdominal segments, and a central spot on sixth segment, black; head beneath and legs orange-yellow; femora

with two black annulations; antennæ black, with the two basal joints orange-yellow.

Length 10 to 12 millim.

Hab. Sikhim. Burma; Arakan (*Atkinson Coll.*); Karennee (*Fea*). Tenasserim; Thagata (*Fea*).

305. **Antestia modificata**, *Dist. Tr. E. S.* 1887, p. 350, pl. 12, f. 4.

Ochraceous, spotted with bluish-black; head luteous, margins of central lobe, margins of lateral lobes from front of eyes, and two spots at base bluish-black; antennæ black; pronotum with eight bluish-black spots, the six largest arranged in double series on disk and a small rounded spot at each lateral angle; scutellum with six bluish-black spots, the four largest in double series on disk and a small spot in each basal angle; corium with four bluish-black spots—one basal, one apical, two discal; membrane pale hyaline, with a large bluish-black spot at base: body beneath pale luteous, sternum spotted with bluish-black, and abdomen with sutural fasciæ and lateral spots of the same colour; legs luteous, femora with a blackish spot near apices.

Length 7 millim.

Hab. Sikhim.

306. **Antestia cruciata**, *Fabr.* (Cimex) *Syst. Ent.* p. 714 (1775); *Amy. & Serv.* (Pentatoma) *Hém.* p. 132 (1843); *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 630.

Strachia geometrica, *Motsch. Bull. Soc. Nat. Mosc.* xxxvi, 2, p. 75 (1863); *Nietn. Enemies of Coffee Tree*, p. 8 (1864).

Strachia velata & subacta, *Walk. Cat. Het.* ii, p. 329 (1867).

Pentatoma pantherina, *Westw. in Hope Cat.* i. p. 34 (1837).

Body above varying in colour from pale greenish to orange-yellow; head with two central lines and a spot before each eye black; pronotum with ten black spots—four (smallest) on anterior margin, and six across disk; scutellum with four black spots (two on basal margin, the other two elongate and angulate on disk), apex usually paler and levigate; corium with three discal black spots and a costal black streak; membrane dark fuliginous, its extreme apical margin greyish: body beneath and legs pale greenish or luteous; sternum and abdomen with two sublateral series of black spots, abdomen with additional central, submarginal, and marginal series; antennæ greenish or ochraceous.

Length 7 to 9 millim.

Hab. Sikhim; Calcutta; Bombay (*Leith*); Nilgiri Hills (*Hampson*). Ceylon (*Green*). Tenasserim (*Brit. Mus.*).—Also received from many islands of the Malayan Archipelago.

A well-known coffee pest. "Feeds on the berries of the coffee-tree" (*E. E. Green*). "Attacks the young berries of *Coffea arabica* in Ceylon" (*Nietner*).

b. *Lateral angles of the pronotum subprominent.*

307. **Antestia degenera**, *Walk.* (Pentatoma) *Cat. Het.* ii, p. 304. 132 (1867).
Antestia angulosa, *Stål, Öfr. Vet.-Ak. Förh.* 1870, p. 630.
Pentatoma punctatissima, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 83 (1891).

Ochraceous, somewhat thickly darkly punctate; a faint transverse ochraceous fascia between pronotal angles; apex of scutellum and two irregularly shaped spots on corium—one about centre and one near apex—luteous, levigate; head with two narrow central luteous fasciæ with dark margins: body beneath and legs ochraceous; prosternum, metasternum, and lateral areas of abdomen somewhat thickly brownly punctate; apex of rostrum and small marginal spots to abdomen piceous; lateral angles of the pronotum subprominent.

Length 8 millim.

Hab. Ceylon (*Green*). Burma; Teinzo, Bhamo, Rangoon, Katha (*Fea*).—Also received from the Malay Peninsula and several islands of the Malayan Archipelago.

Antestia securigera, Walk. (*Strachia*) Cat. Het. ii, p. 334. 73 (1867), has been included by Atkinson in the Indian fauna on the authority of Walker, who gave the habitat of his species "Mysol, Burma." An examination of the three specimens on which Walker founded his species proves that they all came from the Island of Mysol.

Genus APINES.

Apines, *Dall. List Hem.* i, p. 232 (1851).

Type, *A. concinna*, Dall.

Distribution. Brit. India.

Oblong-ovate, somewhat elongate; head moderately deflected, about as broad as long, apex rounded, lobes of about equal length; basal joint of antennæ not reaching apex of head; rostrum about or not quite reaching the posterior coxæ; pronotum broader than long, narrowed anteriorly, lateral angles not prominent; scutellum moderately broad, a little longer than broad at base, somewhat narrowed towards apex, subtriangular; corium longer than membrane, with its apical margin obliquely rounded; membrane with longitudinal veins; mesosternum sulcated; abdomen unarmed.

308. **Apines concinna**, *Dall. List Hem.* i, p. 232 (1851).

Black, shining, thickly punctate; pronotum with a central somewhat elongate pale stramineous spot, between which and

base is sometimes a smaller spot; scutellum with three basal spots, a transverse arcuate spot—sometimes linearly extending posteriorly—and the apex pale stramineous; corium with the basal lateral margin and a transverse fasciate spot on apical area pale stramineous: body beneath black; a spot at each posterior basal angle of metasternum, some elongate lateral marginal abdominal spots, coxæ, bases of femora, and the tibiæ pale stramineous or creamy-white; bases and apices of tibiæ more or less black; antennæ black, with the second joint castaneous.

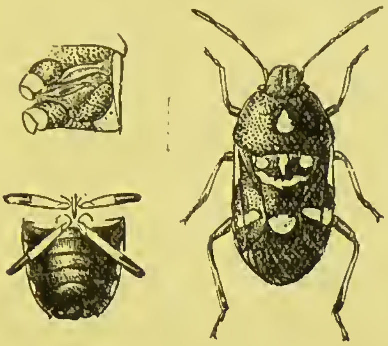

Fig. 111.—*Apines concinna.*

Length $6\frac{1}{2}$ millim.

Hab. Hardwár (*Coll. Atkinson*); Bombay.

"Reported as attacking rabi (*i. e.* winter) crops in the North-West Provinces" (Indian Museum Notes, vol. ii, p. 165).

Division *EURYDEMARIA.*

I include in this Division a number of genera distinguished primarily from the *Antestiaria* by the shape and size of the scutellum, which is triangular, longer than broad, with the apex more or less acuminately narrowed. The body is more elongate and less convex than in the preceding division; and a superficial character is that most of the genera of the *Eurydemaria* are brilliantly coloured. The abdomen is unarmed at base.

Synopsis of Genera.

A. Scutellum not extending beyond middle of abdomen .... GYNENICA, p. 188.

B. Scutellum extending beyond middle of abdomen.

- a. Body remotely pilose .... AGONOSCELIS, p. 189.
- b. Body glabrous, not pilose.
  - *a.* Basal joint of antennæ not extending beyond apex of head.
    - a^1. Eyes sessile; anterior and anterior lateral pronotal margins elevated, callous .... EURYDEMA, p. 190.
    - b^1. Eyes moderately stylate.
      - a^2. Pronotum with the anterior margin somewhat concave, elevated and callous .... STENOZYGUM, p. 192.

b^2. Pronotum with the anterior margin moderately truncate and neither elevated nor callous.... BAGRADA, p. 193.

b. Basal joint of antennæ extending beyond apex of head.

a'. Basal joint of posterior tarsi as long as the second and third joints together; lateral margins of pronotum not sinuate .... CINXIA, p. 194.

b'. Basal joint of posterior tarsi shorter than second and third joints together; lateral margins of pronotum sinuate. STRACHIA, p. 195.

Genus GYNENICA.

Gynenica, *Dall. List Hem.* i, p. 180 (1851).

Type, *G. marginella*, Dall., a South-African species.

Distribution. Ethiopian and Oriental Regions.

Body elongate-ovate; head elongate, tapering gradually to apex, lobes equal in length, the central with its apex slightly prominent; antennæ with the basal joint not reaching apex of head; rostrum reaching the base of the abdomen; lateral angles of pronotum produced into strong acute spines directed forward and upward; scutellum triangular, longer than broad, its apex subacute, not extending beyond the middle of abdomen; membrane with longitudinal veins.

309. **Gynenica affinis**, *Dist. Ent. Month. Mag.* xvi, p. 202 (1880).

Chocolate-brown; central lobe of head, anterior area of pronotum, lateral and apical areas of scutellum, connexivum, body beneath, and legs stramineous; body above punctate, the corium most thickly and the scutellum most sparingly so; pronotal angles produced into long acute black spines, slightly directed forward; antennæ fuscous; sternum thickly punctate; abdomen almost impunctate; rostrum greenish-ochraceous, its apex black.

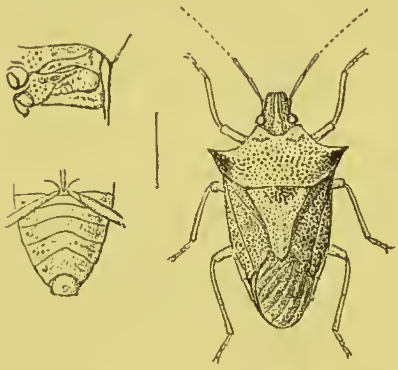

Fig. 112.—*Gynenica affinis.*

Length 9 to 10; breadth between pronotal angles 6 millim.

Hab. Sikhim. Bombay (*Leith*). Calcutta.

— Atkinson included *G. marginella*, Dall., from an unknown locality. Dallas had no habitat for his type, but I was able in 1880 to record the species as belonging to South Africa.

Genus AGONOSCELIS.

Agonoscelis, *Spin. Ess.* p. 327 (1837); *Dall. List Hem.* i, p. 152 (1851); *Stål, Hem. Afr.* i, p. 177 (1864).
Nevroscia, *Amy. & Serv. Hém.* p. 109 (1843).

Type, *A. nubila*, Fabr.

Distribution. Ethiopian, Oriental, and Australasian Regions.

Body elongately ovate, remotely pilose; head generally narrowed in front, rounded at apex, lobes of equal length; anterior lateral margins of pronotum entire, straight, somewhat acute, anterior margin somewhat callous centrally; scutellum long, triangular, narrowed to apex, much longer than broad at base; mesosternum centrally moderately carinate; abdomen sometimes moderately sulcate and unarmed at base.

310. **Agonoscelis nubila**, *Fabr.* (Cimex) *Syst. Ent.* p. 712 (1775); *Fabr.* (Halys) *Syst. Rhyng.* p. 183 (1803): *Hahn* (Ælia?), *Wanz. Ins.* iii, p. 29, t. 82, f. 251 (1835); *Dall. List Hem.* i, p. 179 (1851).
Pentatoma grata, *Palis. de Beauv. Ins.* p. 129, *Hém.* t. 9, f. 5 (1805).
Agonoscelis indica, *Spin. Ess.* p. 329 (1837).
Ælia crucifera, *Westw. in Hope Cat.* i, p. 32 (1837).
Nevroscia sulciventris, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 144, pl. ii, f. 11 (1862).

Body ochraceous, thickly covered with coarse black punctures, excepting the lateral margins and central fascia to head, lateral and anterior margins and an irregular central fascia to pronotum, posterior central fascia and apex to scutellum, and basal lateral margin to corium, which are levigate and more or less orange-yellow; there are also scattered luteous rugosities particularly distinct on the anterior lateral areas of the scutellum; connexivum orange-yellow, with minute black spots at the apices of the incisures; membrane pale fuliginous with the veins piceous: body beneath and legs luteous, lateral margins of sternum and abdomen orange-yellow; antennæ, apex of rostrum, tibiæ, tarsi, and apices of femora, a double lateral series of spots to sternum and abdomen, the last with an additional double series of very small spots, black.

Length 10 to 11 millim.

Hab. Kashmir; Sind Valley (*Stoliczka*). Khási Hills (*Chennell*); Nága Hills (*Doherty*). Calcutta; Bombay (*Dixon*); Nilgiri Hills (*Hampson*); Mysore. Ceylon (*Green*). Burma; Arakan (*Ind. Mus.*). Tenasserim; Malewoon (*Fea*).—Also found in China, Japan, the Malay Peninsula, and several islands of the Malayan Archipelago.

"At Bombay, usually found on the *Ghevda* creeper (*Dolichos lablab*, Linn.)."—*R. M. Dixon.*

311. **Agonoscelis femoralis**, *Walk. Cat. Het.* iii, p. 545 (1868).

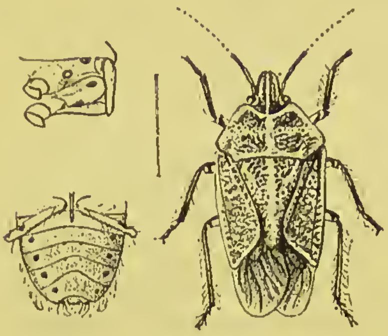

Fig. 113.—*Agonoscelis femoralis.*

Larger and more elongate than *A. nubila*; a continuous central fascia through pronotum and scutellum, third joint of antennæ distinctly a little longer than second, pronotum less coarsely punctate, apical margin of corium greyish, membrane piceous, its margin pale hyaline.

Length 12 millim.

Hab. North Khási Hills (*Chennell*).

Genus EURYDEMA.

Pentatoma, *subg.* Eurydema, pt., *Lap. Ess. Hém.* p. 61 (1832): *Stål, Öfv. Vet.-Ak. Förh.* 1872, 3, p. 39; *id. En. Hem.* v, p. 60 (1876).
Strachia, pt., *Hahn, Wanz.* i, p. 180 (1831); *Fieb. Eur. Hem.* p. 341 (1861).

Type, *E. oleraceum*, Linn., a Palæarctic species.

Distribution. Palæarctic and Oriental Regions.

Body ovate; head with the lateral margins distinctly reflexed, eyes sessile, basal joint of antennæ not reaching apex of head; pronotum with the anterior and anterior lateral margins elevated, callous, the lateral angles neither produced nor prominent: scutellum triangular, longer than broad at base, narrowed to apex which is subacute; mesosternum centrally carinate; abdomen unarmed at base.

312. **Eurydema pulchrum**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 34 (1837); *Dall.* (Strachia) *List Hem.* i, p. 258 (1851); *Stål, En. Hem.* v, p. 86 (1876).
Eurydema sumatrana, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 152, f. 20 (1862).
Strachia designata, *Walk. Cat. Het.* ii, p. 327 (1867).

Fig. 114.—*Eurydema pulchrum.*

Reddish-ochraceous, spotted with black; head black, the margins ochraceous; pronotum with six black spots—two anterior and transverse, four discal; scutellum with a large spot at base and two marginal subapical spots black; clavus and inner area of corium, much angulated, and two marginal spots black; membrane black, its

apical margin greyish: body beneath and legs luteous; lateral margins of sternum and abdomen orange-yellow, and both with lateral and central series of transverse black spots, those on the abdomen sometimes fused as in above figure, and a series of small marginal black spots at apices of incisures; antennæ, rostrum, tibiæ, tarsi, and apices of femora more or less black; body above finely punctate.

Length 8 to 9 millim.

Hab. Sikhim. Assam; Margherita (*Doherty*), Khási and Nága Hills (*Chennell*). Burma; Teinzo, Bhamo (*Fea*).—A common Javan species, and received from China and Sumatra. I also possess a Queensland specimen which is apparently conspecific.

313. **Eurydema lituriferum**, *Walk.* (Strachia) *Cat. Het.* ii, p. 326 (1867).
Eurydema vicarium & *var.* supplens, *Horv. Termez. Fuzetek*, xii, p. 32 (1889).

Allied to *E. pulchrum*, but head not so broadly margined with ochraceous and with three reddish-ochraceous spots, one central near base, and the other two on lateral lobes; pronotum, scutellum, and corium marked as in *E. pulchrum*, but corium with the posterior lateral margin ochraceous: body beneath with the black spots much smaller; body longer, upper surface more distinctly punctate.

Var. In some specimens the four discal spots on the pronotum are obliterated.

Length 10 millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*). Burma; Teinzo (*Fea*).

314. **Eurydema festivum**, *Linn.* (Cimex) *Syst. Nat.* ii, p. 723 (1767); *Dist. Sec. Yarkand Miss., Rhynch.* p. 6 (1879); *Reut. Rev. d'Ent.* iii, p. 68 (1884), et syn.

Closely allied to *E. lituriferum*, but shorter and more ovate; head either wholly black, with two spots, or with three as in Walker's species. Beyond the size and shape of the body, which appear to be constant characters, there is little to separate this Palæarctic species, which just enters North-western India, from *E. lituriferum*, which does not appear to extend farther west than Sikhim.

Length 8 to 9 millim.

Hab. Kashmir; Sind Valley (*Stoliczka*).—Distributed throughout the Palæarctic Region; I possess specimens from Madeira, Morocco, and Eastern Turkestan; it is also found in N.W. Siberia and at Astracan.

315. **Eurydema multipunctatum**, *Dist. Tr. E. S.* 1887, p. 348, pl. 12, f. 6.

Body above pale ochraceous, sometimes suffused with purplish; head with the margins of the central lobe and the basal margin black; antennæ ochraceous, fourth and fifth joints and the apex of the third palely infuscated; pronotum with twelve black spots—four on anterior margin, six between pronotal angles, and one on each discal area; scutellum with ten black spots—four at base, four near centre, and two before apex; corium with three discal black spots; membrane pale hyaline, the inner angle black: body beneath pale ochraceous; a double submarginal series of black spots to sternum and abdomen, and a transverse black spot on each side of metasternum; rostrum ochraceous, with the apex piceous.

Length 8 to 9 millim.

Hab. Assam (?) (*Atkinson Coll.*).

Atkinson in his notes on Indian Rhynchota (J. A. S. B. lvii, pp. 53, 54, 1888) enumerates three other species of *Eurydema*, which, however, possess no credentials for inclusion in this fauna:—

Eurydema dominulum, Scop. A Palæarctic species. "Probably found in N. India" (*Atkinson*).

Eurydema wilkinsi, Dist. Described from Yangi-hissar, E. Turkestan, and therefore not belonging to the fauna of Brit. India.

Eurydema ornatum, Linn. In my record of the Rhynchota collected during the "Second Yarkand Mission" I enumerated a var. of *E. festivum* as *herbacea*, Herr.-Sch. This Atkinson has considered a var. of *E. ornatum*, Linn., and consequently recorded that species.

Genus STENOZYGUM.

Stenozygum, *Fieb. Eur. Hem.* p. 345 (1861); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 520.

Nitilia, *subg.* Minodia, *Muls. & Rey, Pun. France, Pent.* p. 199 (1866).

Type, *S. variegatum*, Fieb., a Palæarctic species.

Distribution. Palæarctic, Ethiopian, Oriental, and Australasian Regions.

Body oval, shining, somewhat convex; head a little deflected; eyes moderately stylate; lateral margins rounded, sinuate near base; pronotum transversely impressed, with the anterior margin a little concave, elevated and callous, lateral margins entire; scutellum longer than broad, narrowed to apex, a little elevated at base; abdomen unarmed; basal joint of antennæ not extending beyond apex of head, usually not reaching that point.

316. **Stenozygum speciosum**, *Dall.* (Strachia) *List Hem.* i, p. 261 (1851); *Stål, En. Hem.* v, p. 86 (1879).
Strachia inornata, *Walk. Cat. Het.* ii, p. 331. 66 (1867).

Black, shining; head with three central luteous spots; pronotum with the lateral margins, a central fascia with a small spot on each side, two small spots on anterior margin, and a spot behind each lateral angle luteous; scutellum with a central fascia, an elongate spot near each basal angle, and a subapical triangular patch (marked with reddish) luteous; corium with costal streaks, a subapical transverse fascia, a discal spot and anterior lateral margin luteous, the transverse fascia contains a reddish spot; connexivum black, spotted with ochraceous: body beneath and legs luteous; a double series of spots to sternum and abdomen, a marginal series of narrow spots to abdomen, apices of femora, bases of tibiæ, tarsi, antennæ, and rostrum black.

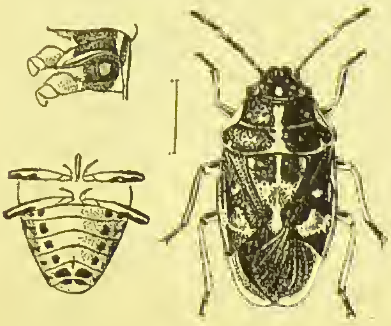

Fig. 115.—*Stenozygum speciosum.*

Length 7 to 9 millim.

Hab. Sind (*Coll. Dist.*). Bombay (*Leith*). Ceylon (*Green*). Burma; Minhla (*Comotto*).

Genus BAGRADA.

Bagrada, *Stål, Stett. ent. Zeit.* xxiii, p. 105 (1862); *id. Öfv. Vet.-Ak. Förh.* 1872, 3, p. 39.
Nitilia, *Muls. & Rey, Pun. France, Pent.* p. 197 (1866).

Type, *B. picta*, Fabr.

Distribution. Palæarctic, Ethiopian, and Oriental Regions.

Body subovate; head triangular, lateral lobes a little longer than the central, converging forwards and separated between their apices; margins reflexed; eyes moderately stylate; basal joint of antennæ not reaching apex of head; pronotum obscurely sexangular, anterior margin somewhat truncate, not distinctly elevated and callous; mesosternum carinate; abdomen unarmed.

317. **Bagrada picta**, *Fabr.* (Cimex) *Syst. Ent.* p. 715 (1775); *Dall.* (Strachia) *List Hem.* i, p. 259 (1851); *Kirby* (Strachia), *J. Linn. Soc., Zool.* xxiv, p. 85 (1891); *Stål, Stett. ent. Zeit.* xxiii, p. 105 (1862).

Black; lateral lobes of head from before eyes, anterior and lateral margins and a central fascia to pronotum, a central fascia, a spot near each basal angle and a spot on each margin before apex of scutellum, a marginal fascia to corium becoming submarginal a little beyond base and terminating in a rounded discal

spot before apex, ochraceous; connexivum ochraceous, spotted with black; membrane fuliginous: body beneath ochraceous; streaks to head, marginal lines to coxæ, lateral marginal spots to sternum and abdomen, margins of abdominal incisures, more or less distinct transverse discal segmental lines, and segmental spots becoming larger posteriorly, black; legs ochraceous, spotted and streaked with black; antennæ black.

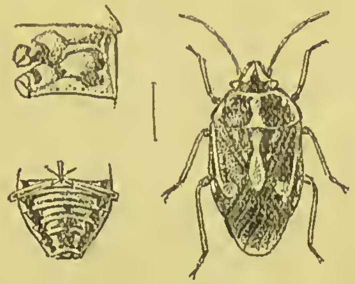

Fig. 116.—*Bagrada picta.*

Length 5 to 7 millim.

Hab. North-west Provinces; Hardwár (*Atkinson Coll.*). Bengal; Tirhoot (*Ind. Mus.*), Calcutta. Manipur (*Coll. Dist.*). Bombay (*Leith*). Ceylon (*Green*).

Specimens were forwarded to me by the late Mr. L. de Nicéville, who found them attacking Natal indigo at Dalsingh Terai, Behar.

Genus CINXIA.

Cinxia, *Stål, Stett. ent. Zeit.* xxiii, p. 105 (1862); *id. Öfv. Vet.-Akad. Förh.* 1867, p. 520.

Type, *C. limbata*, Fabr.

Distribution. Oriental Region.

Elongately ovate; head triangular, lobes of equal length, eyes moderately stylate; antennæ long, basal joint extending beyond the apex of the head; pronotum sexangular, anterior margin callous, lateral margins reflexed and elevated; basal joint of the posterior tarsi as long as the two apical joints taken together.

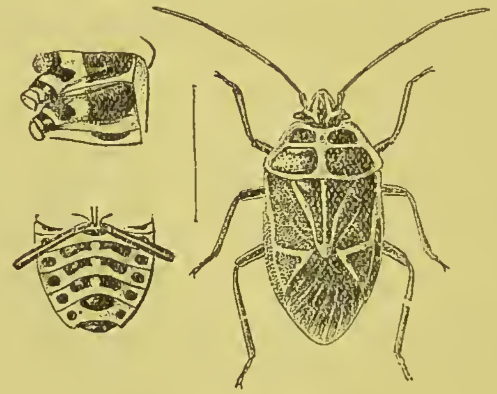

Fig. 117.—*Cinxia limbata.*

318. **Cinxia limbata**, *Fabr.* (Cimex) *Syst. Rhyng.* p. 176 (1803); *Amy. & Serv.* (Strachia) *Hém.* p. 127 (1843); *Stål, Hem. Fabr.* i, p. 30 (1868).

Indigo-black; head ochraceous, with a broad central fascia, base to inner margins of eyes, and a marginal spot above insertion of antennæ indigo-black; pronotum with all the margins, a central longitudinal fascia and a transverse fascia across anterior disk, ochraceous; scutellum with the apex, central and lateral fasciæ ochraceous; corium with the base of lateral margin, connected with inner angle and apical margin, claval margins and veins ochraceous; all these ochraceous markings are sometimes more or less suffused with reddish-ochraceous; body beneath ochraceous, with a double central and submarginal series of indigo-black spots, a large spot of the same colour at base of apical segment; legs black, femora streaked with ochraceous; antennæ black.

Length 13 to 16 millim.

Hab. Assam; Harmatti (*Ind. Mus.*); Nága Hills (*Doherty*). Burma; Kakhyen Kauri (*Fea*). Tenasserim; Thagata (*Fea*); Tavoy (*Ind. Mus.*).—Common in the Malay Peninsula and received from Java and Sumatra.

Genus STRACHIA.

Strachia, *Hahn, Wanz.* i, p. 180 (1831); *Stål, Stett. ent. Zeit.* xxiii, p. 105 (1862).

Type, *S. crucigera*, Hahn.

Distribution. Oriental and Ethiopian Regions *.

Elongately subovate; head triangular, lobes of about equal length, lateral margins strongly reflexed, basal joint of antennæ extending but little beyond apex of head; pronotum sexangular, anterior and anterior lateral margins reflexed, the lateral margins strongly sinuate; femora in male incrassate; basal joint of posterior tarsi shorter than the two apical joints taken together.

319. **Strachia crucigera**, *Hahn, Wanz.* i, p. 184, f. 95 (1831).
Strachia flammula, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 153, f. 23 (1862).
Var. Strachia strangulata, *Wlk. Cat. Het.* ii, p. 344. 90 (1867).
Stenozygum strangulatum, *Leth. & Sev. Cat. Gén. Hém.* i, p. 156 (1893).

Black; head with one central small linear and two apical ochraceous spots; pronotum with the anterior and anterior-lateral margins, narrowly, and a broad central fascia, ochraceous, a transverse fascia on anterior area brownish-ochraceous; scutellum ochraceous tinged with carmine, a spot near centre of each lateral margin and a subapical spot black; corium with the basal

* The West-African *Pentatoma elegans*, Pal. Beauv., constitutes a second species of this genus.

and lateral areas of lateral margin and a transverse fascia before apex pale luteous; apical margin of membrane greyish; sternum blackish, its lateral and segmental margins and coxal spots pale luteous, and a carmine spot on the lateral area of each segment; abdomen beneath luteous, disk piceous, lateral margins carmine, with piceous segmental spots: legs, antennæ, and rostrum black; femora streaked with luteous.

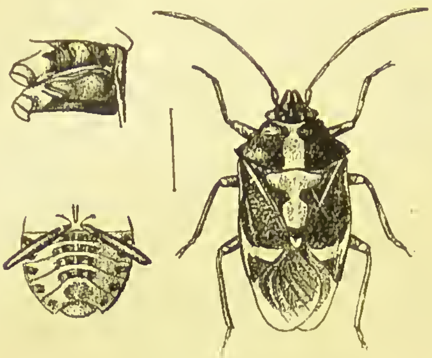

Fig. 118.—*Strachia crucigera.*

Length 8 to 10 millim.

Hab. Khási Hills (*Chennell*). Burma; Teinzo, Bhamo, Schwego-Myo (*Fea*). Tenasserim; Myitta (*Doherty*).—Also found in the Malay Peninsula, Sumatra, Java, and Borneo.

Division *COMPASTARIA.*

I here arrange a group of genera possessing a greater breadth of body with the head broader at the apex and the scutellum usually less acuminate. The species are obscurely coloured, and are allied to the following division, from which they differ by the unarmed base of the abdomen.

Synopsis of Genera.

A. Lateral angles of pronotum not prominently produced.
- a. Head narrowed anteriorly, lobes of equal length. Rostrum long, about reaching abdominal apical segment . . . . CRITHEUS, p. 197.
- b. Head not narrowed anteriorly, lateral lobes a little longer than the central.
  - a^1. Rostrum reaching second or third abdominal segment . . . . FERNELIUS, p. 197.
  - b^1. Rostrum only about reaching intermediate coxæ.
    - a^2. Head longer than broad . . . . AGATHOCLES, p. 198.
    - b^2. Head about as broad as long . . . . . . EXITHEMUS, p. 199.

B. Lateral angles of pronotum prominently produced.
- a. Pronotal angles broad, angulated, or spined.
  - *a*. Head with the margins entire . . . . COMPASTES, p. 200.
  - *b*. Head with the margins lobate and notched . . . . AMASENUS, p. 201.
- b. Pronotal angles neither angulated nor spined . . . . HOMALOGONIA, p. 202.

Genus CRITHEUS.

Critheus, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 517.

Type, *C. lineatifrons*, Stål.

Distribution. At present recorded only from Burma.

Body oval, depressed; rostrum long, extending to or near apical abdominal segment; head somewhat narrowed forwardly, obtusely rounded at the apex, lateral margins acute, very slightly reflexed, lobes of equal length; pronotum with the lateral margins reflexed, straight, anterior margin a little concave and callous, lateral angles obtusely prominent; scutellum triangular, narrow at apex; mesosternum centrally carinate, the carination in a globular depression; abdomen obsoletely sulcate for a short distance from base which is unarmed.

320. **Critheus lineatifrons**, *Stål, Berl. ent. Zeit.* xiii, p. 229 (1869).

Ochraceous, somewhat thickly and coarsely blackly punctate; scutellum and pronotum somewhat rugulose; head and pronotum with a central levigate line extending more obscurely through the scutellum; margins of head and a submarginal anterior and lateral line to pronotum black; a transverse series of four small levigate spots on anterior area of pronotum, and four small levigate spots at base of scutellum; corium with a somewhat prominent levigate spot on posterior disk; membrane pale fuliginous, the veins darker: body beneath and legs pale ochraceous, finely darky punctate; two spots on each lateral area of pro- and mesosterna, stigmata and a short adjacent linear spot, the lateral edges and incisures black; antennæ brownish, base of first, second, third, and fourth joints, and the whole of fifth joint, excluding apex, dull ochraceous.

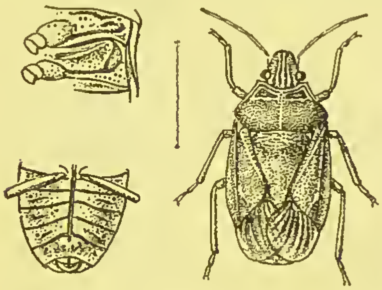

Fig. 119.—*Critheus lineatifrons.*

Length $9\frac{1}{2}$ to $11\frac{1}{2}$ millim.

Hab. Burma; Karennee, Palon (*Fea*). Tenasserim; Kawkareet (*Fea*).

Genus FERNELIUS.

Fernelius, *Dist. Tr. E. S.* 1900, p. 173.

Type, *F. indicus*, Dist.

Distribution. At present recorded only from the Eastern Himalayas and Burma.

Subovate; head broad, anteriorly rounded, but cleft at apex, where the central lobe is a little shorter than the lateral lobes,

the margins of which are reflexed; antennæ with the basal joint not reaching apex of head; pronotum with the anterior angles shortly dentate, the posterior angles obtusely subprominent, lateral margins oblique, very slightly sinuate; rostrum reaching the second or third abdominal segment; mesosternum centrally carinate, the carination in a globular depression; abdomen unarmed at base.

321. **Fernelius indicus**, *Dist. Tr. E. S.* 1900, p. 173.

Castaneous-brown, somewhat irrorated with ochraceous; the corium with a more or less distinct small ochraceous spot on apical area, and a small spot of the same colour in each basal angle of the scutellum; abdomen above reddish-ochraceous; connexivum ochraceous spotted with black at the incisures: body beneath and legs pale ochraceous; antennæ, tibiæ, tarsi, apices of femora, apex of rostrum, elongate spots to sternum, stigmatal spots to abdomen and elongate waved spots between same, lateral marginal spots and a spot on apical segment, black; antennæ fuscous, base of first joint ochraceous (apical joints mutilated in specimens now before me).

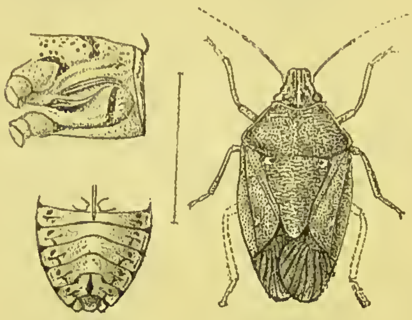

Fig. 120.—*Fernelius indicus.*

Length 18 millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*). Burma; Karennee (*Fea*); Rangoon (*Atkinson Coll.*).

Genus AGATHOCLES.

Agathocles, *Stål, En. Hem.* v, p. 69 (1879).

Type, *A. limbatus*, Stål.

Distribution. At present recorded only from Assam and Sylhet.

Broadly ovate, somewhat flat; head broad, not narrowed to apex, the lateral lobes longer than the central, their margins reflexed and separated between their apices, which are broadly oblique; first joint of antennæ about reaching apex of head; pronotum with the anterior margin broader than the eyes, truncate behind them and apically spinous (as in division *Dorpiaria*), lateral margins sinuate, lateral angles somewhat prominent; scutellum triangular, narrowing to apex, more than half the length of abdomen; rostrum just passing the intermediate coxæ; mesosternum very obsoletely carinate; abdomen unarmed.

322. **Agathocles limbatus**, *Stål, En. Hem.* v, p. 106 (1879).

Dull ochraceous, very thickly and coarsely blackly punctate, the pronotum and base of scutellum distinctly rugulose, head a little darker or sometimes black; antennæ brownish-ochraceous, basal joint usually darkest; lateral margins of the pronotum and basal lateral margin of corium narrowly pale reddish-ochraceous; connexivum brownish-ochraceous, darkly punctate inwardly and prominently dark at apices of incisures: body beneath black; disk of abdomen more or less castaneous; legs brownish-ochraceous; coxæ, trochanters, bases of femora, and rostrum luteous; lateral margins of sternum, basal margin of corium as seen beneath, and a broad lateral margin to abdomen bright ochraceous or reddish-ochraceous.

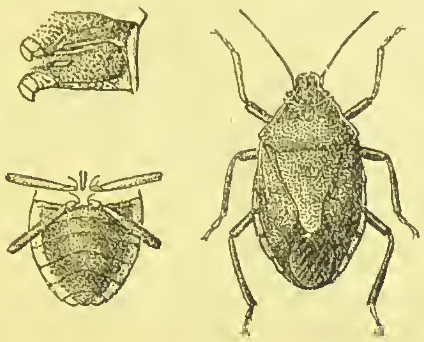

Fig. 121.—*Agathocles limbatus.*

Length 20 to 22; breadth between pronotal angles 11 millim.

Hab. Assam (*Coll. Dist.*). Sylhet (*Stockholm Mus.*).

Genus EXITHEMUS, nov.

Type, *E. assamensis*, Dist.

Distribution. Assam.

Allied to *Agathocles*; head shorter and broader, the lateral lobes only slightly longer than the central, their apices rounded; pronotum with the anterior margin a little wider than the eyes, but less truncate behind them, the apical angles obtusely prominent, lateral angles a little more produced, between them is a slight transverse ridge, beyond which the anterior area is moderately deflected; connexivum distinctly angulated at apices of incisures; rostrum just passing the intermediate coxæ; abdomen unarmed at base; (antennæ accidentally mutilated in unique specimen before detailed description was written).

323. **Exithemus assamensis**, sp. n.

Ochraceous, somewhat thickly darkly punctate, much more sparingly so on scutellum, the central disk of which is consequently much paler in hue; a linear levigate fascia between pronotal angles, from the centre of which a similar fascia crosses anterior area and extends through head; a small luteous levigate spot near each basal angle of the scutellum, which is black; connexivum with the apices of the incisures black: body beneath and legs ochraceous, sparingly darkly punctate, abdomen more reddish-ochraceous; the punctures on sternum more confluent near coxæ and on lateral areas of prosternum; abdomen with the basal margin and a short fascia on each lateral area black; anterior legs blackly punctate, the femora with a large black spot beneath a little before

apex; (intermediate and posterior legs mutilated in unique specimen described).

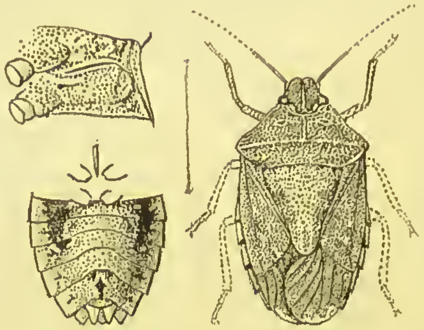

Fig. 122.—*Exithemus assamensis.*

Length 15; breadth between pronotal angles 9 millim.
Hab. Assam (*Coll. Dist.*).

Genus COMPASTES.

Compastes, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 519.

Type, *C. bhutanicus*, Dall.

Distribution. Eastern Himalayas, Assam Hills, Northern Burma, and Eastern Palæarctic Region.

Head flat, rounded anteriorly, lateral lobes longer than the central, divided at their apices, their lateral margins somewhat laminately reflexed; rostrum just passing the posterior coxæ; first joint of antennæ not reaching apex of head; pronotum with the lateral angles produced in broad truncate processes, their apices directed forward and a little upward, their margins dentate, anterior lateral margins crenulate; membrane with the veins sparingly furcate; abdomen beneath somewhat gibbous on basal area, unarmed at base; mesosternum centrally carinate.

This genus is abnormal in having the tarsi of two joints only.

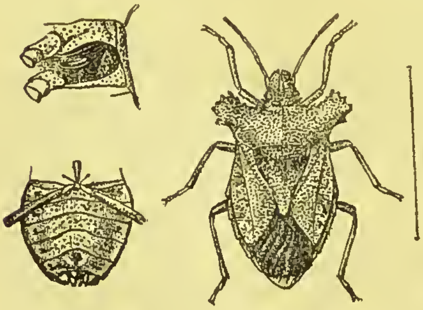

Fig. 123.—*Compastes bhutanicus.*

324. **Compastes bhutanicus,** *Dall.* (Cimex?) *Tr. E. S.* v, p. 190, pl. 19, f. 4 (1849).

Dark brownish-ochraceous, thickly and rather darkly punctate; pronotum and corium somewhat rugulose and subnodulose; scutellum transversely rugulose; pronotal angles armed at their apices with fine spines, of which the posterior is most acute, the anterior angles each terminating in a distinct spine behind the eye: body beneath ochraceous,

thickly speckled with reddish, except on the head and lateral areas of the sternum, which are brownly punctate; legs brownish-ochraceous mottled with reddish-brown; antennæ brownish-ochraceous, apical joint of each luteous with its apex infuscated.

Length 17 to 20; breadth between pronotal angles 11 to 13 millim.

Hab. Bhutan (*Brit. Mus.*). Sikhim (*Atkinson Coll.*). Cachar (*Wood-Mason*). Burma; Ruby Mines (*Doherty*).

325. **Compastes exstimulatus**, sp. n.

Allied in general structure, colour, and appearance to *C. bhutanicus*, but differing in the following characters:—the head has a distinct spine in front of each eye; the anterior pronotal angles behind eyes are produced in a somewhat long curved spine, behind which are two prominent spines on the anterior lateral margins; the apices of the pronotal angles are broadly concave between two prominent spines and two similar spines on the anterior lateral margin, these produced angles are not broadened apically as in *C. boutanicus*; scutellum with a very distinct central ridge; body beneath darker than in Dallas's species.

Length 15 to 17; breadth between pronotal angles 10 to 11 millim.

Hab. Nága Hills (*Doherty*).

326. **Compastes spinosus**, *Dist. Tr. E. S.* 1887, p. 351, pl. 12, f. 11.

Above brownish, coarsely and darkly punctate; pronotum rugulose, with a central longitudinal luteous line, the lateral margins with three prominent spines ochraceous at their apices, the first at anterior angle behind eye; the lateral angles shortly and broadly produced, their apices rounded anteriorly, subtruncate posteriorly, and terminating in a very short ochraceous spine: body beneath brownish and darkly punctate; legs ochraceous, mottled and spotted with brownish; sublateral margins of the sternum bronzy; lateral abdominal margins with a series of segmental pale ochraceous spots; rostrum ochraceous, its apex piceous; (antennæ mutilated in the typical specimen).

Length 17; breadth between pronotal angles 8 millim.

Hab. Sikhim (*Coll. Dist.*).

Genus **AMASENUS**.

Amasenus, *Stål, Tr. E. S.* ser. 3, i, p. 601 (1863).

Type, *A. corticalis*, Stål.

Distribution. Assam and Malay Peninsula.

Body oval, depressed; head with the lateral lobes longer than the central and distant from each other, their margins lobate in front of eyes, notched and narrowed before apex; rostrum just reaching base of third ventral segment; antennæ five-jointed, basal joint not nearly reaching apex of head; pronotum with the anterior lateral margins dentate, the lateral angles somewhat

strongly and broadly produced; scutellum long, slightly bigibbous on basal area, margins oblique to about centre and then somewhat straight to apex, which is broadly angulated; lateral segmental angles strongly angulated; mesosternum obscurely carinate within the furrow of a central globosity; abdomen unarmed at base.

327. **Amasenus corticalis**, *Stål, Tr. E. S.* ser. 3, i, p. 602 (1863).

Ochraceous and moderately thickly darkly punctate; apices of the antennal joints infuscated; eyes black; pronotum rugulose, rugose at anterior and basal areas, anterior lateral margins robustly spined, lateral angles broadly produced, their anterior margins a little convex, their apices somewhat obliquely truncate; corium

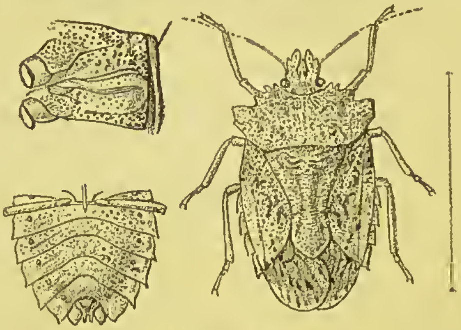

Fig. 124.—*Amasenus corticalis.*

shaded with confluent patches of dark punctures; membrane spotted with fuscous: body beneath as above; sternum with a broken sublateral black fascia; stigmata piceous; femora and tibiæ with obscure subapical dark biannulations.

Length 24; breadth between pronotal angles 13½ millim.

Hab. Assam (*Atkinson*). Malacca (*Stockholm Mus.*).

Genus HOMALOGONIA.

Homalogonia, *Jakowl. Bull. Soc. Nat. Mosc.* 1876, p. 89.

Type, *H. obtusa*, Walk.

Distribution. North-eastern Palæarctic Region and North-western India.

Broadly oval; head broad, lateral margins nearly straight, lateral lobes longer than the central but divided at their apices; basal joint of antennæ not reaching apex of head; rostrum reaching the posterior coxæ; pronotum broad, its lateral angles moderately produced, obtusely rounded, lateral margins crenulate at their apices; scutellum broad at base but narrowing to apex; mesosternum carinate; abdomen unarmed.

328. **Homalogonia obtusa**, *Walk.* (Pentatoma) *Cat. Het.* iii, p. 560 (1868); *Dist.* (Compastes) *A. M. N. H.* (5) viii, p. 28 (1881).
Homalogonia maculata, *Jakowl. Bull. Soc. Nat. Mosc.* 1876, p. 90; *Horv. Rev. d'Entom.* xvii, p. 278 (1898).
Compastes minor, *Atk. J. A. S. B.* lvii, p. 344 (1889).

Dull ochraceous, very thickly and finely darkly punctate; antennæ with the basal joint fuscous, second and third joints reddish-ochraceous, fourth and fifth joints luteous, their apical halves infuscated; pronotum with four obscure luteous spots in transverse series on anterior area, lateral margins speckled with luteous; connexivum concolorous: body beneath and legs pale luteous; legs blackly punctate, a black spot on each lateral area of pro- and mesosterna; abdomen very sparsely darkly punctate; stigmata, punctures on sternal margins, and linear spots on abdominal margins black.

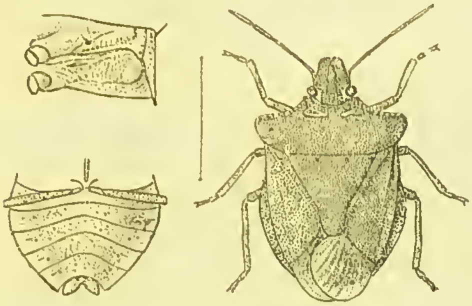

Fig. 125.—*Homalogonia obtusa.*

Length 12 to 15; breadth between pronotal angles 8 to 9 millim.

Hab. Chakráta, Jaunsár-Báwar, N.W. Provinces (*Atkinson Coll.*). Common in Japan, N.W. China, and Siberia.

Division *TROPICORARIA.*

In this and the succeeding divisions of the Pentatominæ the abdomen is more or less distinctly spined at the base, the spine being sometimes long, whilst in other genera the protuberance is more of an angulated tubercle. In the *Tropicoraria* as here defined the pronotal lateral margins are dentate or serrate, sometimes crenulate, but never entire. The pronotal angles are always, usually strongly, produced.

Synopsis of Genera.

A. Antennæ five-jointed.
- a. Mesosternum carinate, the carination not raised and pointedly produced anteriorly.
  - *a.* Metasternum not carinate.
    - *a'.* Anterior margins of pronotal angles gradually rounded or forming an angle towards the apex .... TROPICORIS, p. 204.
    - *b'.* Anterior margins of pronotal angles straight, apices acute or subacute . PRIASSUS, p. 205.
  - *b.* Metasternum carinate .... LELIA, p. 206.
- b. Mesosternum carinate, the carination raised and pointedly produced anteriorly .... PLACOSTERNUM, p. 209.
- c. Mesosternum sulcate .... PRIONACA, p. 207.

B. Antennæ four-jointed .... DEGONETUS, p. 208.

Genus TROPICORIS.

Tropicoris, *Hahn, Wanz. Ins.* ii, p. 52 (1834); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 518.

Type, *T. rufipes*, Linn., a Palæarctic species.
Distribution. Palæarctic Region and India.

Head more or less narrowed to apex, sometimes gradually, in other species apically narrowed, the lateral margins not sinuate; antennæ somewhat long, five-jointed, basal joint not reaching apex of head; pronotum with the lateral angles irregularly produced, either acutely or truncately, the lateral margins finely serrate, truncate behind the eyes, with the anterior angles acutely produced; scutellum somewhat long, attenuated posteriorly; mesosternum prominently carinate; abdomen either tuberculate at base or armed with a spine of variable length.

329. **Tropicoris punctipes**, *Stål, En. Hem.* v, p. 106 (1876).
Compastes truncatus, *Dist. Tr. E. S.* 1887, p. 351, pl. 12. f. 10.*

Brownish-ochraceous, coarsely and darkly punctate; connexivum luteous, with blackish spots at bases and apices of sutures; membrane brownish, the venation darker; antennæ with the first,

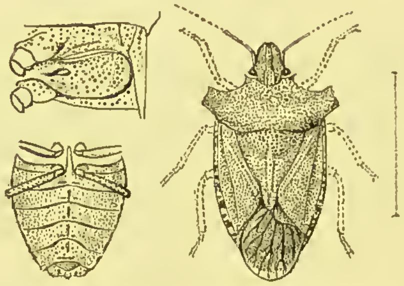

Fig. 126.—*Tropicoris punctipes.*

second, and third joints brownish, minutely darker at apices, second joint longer than third; pronotum with the lateral margins obtusely serrate, the lateral angles produced into broad and apically truncated spines: body beneath and legs ochraceous, brownly punctate; rostrum reaching the second abdominal segment, its apex piceous; ventral spine reaching the intermediate coxæ.

Length 16; breadth between pronotal angles 10 millim.
Hab. Sikhim.

* As may be seen from the figure of *Compastes truncatus*, Tr. E. S. 1887, pl. 12, f. 10, the tarsi were totally absent, and I thus mistook the generic position of the species.

330. **Tropicoris læviventris,** *Stål, En. Hem.* v, p. 105 (1876).

Luteous, blackly punctate, the punctures in the anterior area of the pronotum and in the anterior lateral margin of corium brassy; membrane sordidly hyaline; connexivum fuscescent-testaceous, punctate (the two apical segments excepted), segments with a pale marginal spot; abdomen beneath levigate, stigmata black; corium irrorated with small somewhat rounded impunctate spots; rostrum reaching the base of the abdomen; head posteriorly with a lateral spot and with a central larger levigate spot which contains a central double series of punctures.

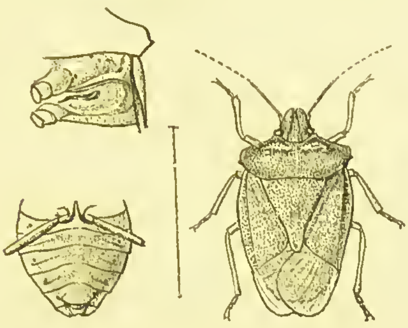

Fig. 127.—*Tropicoris læviventris.*

Length 18; breadth 10 millim.

Hab. India.

I am indebted to Dr. Handlirsch for an opportunity of figuring this species, which formed part of Signoret's collection now contained in the Vienna Museum.

Genus **PRIASSUS.**

Priassus, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 518.

Type, *P. spiniger*, Hagl.

Distribution. Assam; Burma; Malay Archipelago.

Head somewhat narrowed anteriorly, the portion in front of eyes about as long as broad, the lobes equal in length or lateral lobes a little longer than the central and slightly separate at their apices, basal joint of antennæ not reaching apex of head; rostrum about reaching posterior coxæ; pronotum with the lateral margins concavely sinuate, finely serrate, behind eyes truncate, anterior angles acute, lateral angles prominent, acutely or subacutely produced; scutellum more than half the length of abdomen, its apex subacute; apical angle of corium a little produced; mesosternum carinate, the carination elevated and somewhat laminate; base of abdomen armed with a long spine, which reaches the intermediate coxæ.

331. **Priassus spiniger,** *Hagl. Stett. ent. Zeit.* xxix, p. 160 (1868).

Luteous, finely punctate, the corium more thickly and coarsely punctate; lateral area and apex of head, lateral areas and angles of pronotum, with an irregular transverse fascia between the last, pale carmine-red with black punctures, a few scattered black punctures on posterior area of pronotum; antennæ luteous (apical

joint mutilated in specimens described); lateral margins of corium blackly punctate: body beneath and legs pale ochraceous; a few scattered black dots on pro- and mesosterna, and the abdominal stigmata margined with black. Lateral lobes of head slightly longer than central.

Length 16 to 21; breadth between pronotal angles 10 to 15 millim.

Hab. Nága Hills (*Doherty*). Burma; Ruby Mines (*Doherty*).—Also found in Java and Sumatra.

332. **Priassus exemptus**, *Walk.* (Prionaca) *Cat. Het.* iii, p. 569 (1868).
Priassus carinatus, *Horv. Termész. Füzetek*, xii, p. 32 (1889).

Allied to *P. spiniger*, Hagl., but differing by the much less produced pronotal angles; the reddish coloration to head and pronotum is much less intense; and the lobes of the head are equal in length.

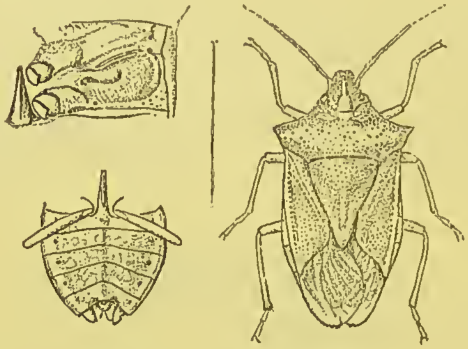

Fig. 128.—*Priassus exemptus.*

Length 16 to 19; breadth between pronotal angles 9½ to 11 millim.

Hab. Nága Hills (*Doherty*). Tenasserim; Mt. Mooleyit (*Fea*).

Genus LELIA.

Rhaphigaster, *subg.* Prionochilus, *Dall. Tr. E. S.* v, p. 191 (1849); *Stål, En. Hem.* v, p. 107 (1876), *nom. præocc.*
Lelia, *Walk. Cat. Het.* ii, p. 406 (1867).
Renardia, *Jakowl. Bull. Soc. Nat. Mosc.* 1876, 2, p. 99.

Type, *L. octopunctata*, Dall.

Distribution. Assam, Eastern Himalayas, and Eastern Palæarctic Region.

Head with the lateral lobes a little longer than the central lobes and sometimes separate at their apices; pronotum with the lateral margins strongly serrate, the lateral angles strongly and somewhat lunately produced; meso- and metasterna centrally carinate; abdomen beneath with a distinct central longitudinal ridge, basal spine long, just passing the intermediate coxæ.

333. **Lelia octopunctata,** *Dall.* (Prionochilus) *Trans. Ent. Soc.* v, p. 192 (1849).

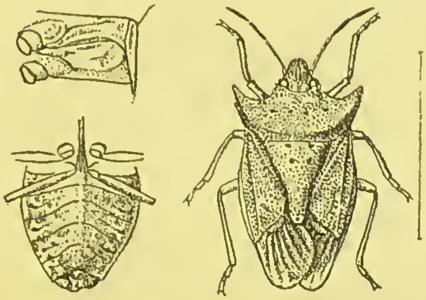

Fig. 129.—*Lelia octopunctata.*

Ochraceous, thickly and finely brownly punctate; pronotum with the marginal serration luteous, and with four transverse black spots on its anterior area; scutellum with four basal black spots arranged in pairs; body beneath and legs ochraceous; sternum finely punctate; abdomen wrinkled and more coarsely punctate; antennæ with the first, second, and third joints ochraceous, fourth and fifth joints piceous with their bases ochraceous.

Length 18 to 20; breadth between pronotal angles 12 millim.

Hab. Bhután (*Brit. Mus.*). Khási Hills (*Chennell*).

Genus PRIONACA.

Prionaca, *Dall. List Hem.* i, p. 291 (1851).

Type, *P. lata*, Dall.

Distribution. Assam, Burma, Sumatra, Java, and Borneo.

Body short and broad; head nearly as broad as long, rounded

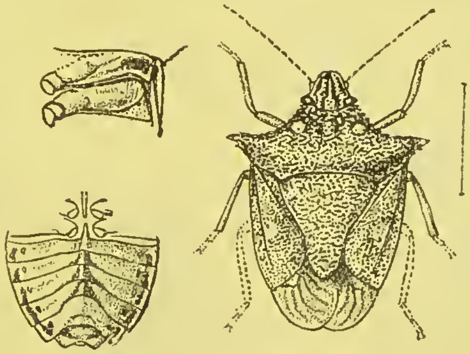

Fig. 130.—*Prionaca lata.*

in front, lateral lobes just meeting in front of the central lobe; antennæ with the basal joint robust and not reaching apex of head; rostrum not quite reaching the posterior coxæ; pronotum with the lateral angles produced into strong acute spines, the lateral

margins distinctly serrate; scutellum very little longer than broad at base, the apex rounded; corium with the apical margin rounded; membrane with longitudinal veins; ventral spine just passing the posterior coxæ; mesosternum distinctly sulcated.

334. **Prionaca lata**, *Dall. List Hem.* i. p. 291 (1851).

Luteous, thickly punctured with dark castaneous; pronotum with a levigate luteous spot on each side of anterior area; corium with a levigate luteous spot on disk; membrane fuliginous, its inner basal angle piceous: body beneath and legs ochraceous, body sometimes almost wholly greyishly tomentose; abdomen with a central series of transverse and a submarginal series of elongate brownish spots; antennæ with the first, second, and third joints ochraceous (remainder mutilated in specimens now before me).

Length 13; breadth between pronotal angles 10 millim.

Hab. Sylhet (*Brit. Mus.*). Khási Hills (*Chennell*).—Also recorded from Java.

335. **Prionaca burmanica**, sp. n.

Allied to *P. lata*, Dall., but the head is narrower, the apices of the pronotal angles more obtuse; also the two luteous spots to pronotum and the discal spot to corium are wanting. Head beneath, lateral margins of prosternum and under surface of lateral spines, with central area of mesonotum, black; abdominal margins pale castaneous, containing a series of ochraceous spots; stigmata black.

Length 12; breadth between pronotal angles 9 millim.

Hab. Nága Hills (*Chennell*). Burma (*Coll. Dist.*).

Genus **DEGONETUS**, nov.

Type, *D. serratus*, Dist.

Distribution. India.

Body broad and somewhat short; head narrowed anteriorly, the lateral lobes longer than the central, but separate at their apices; antennæ four-jointed, basal joint not reaching apex of head, second joint very long, about as long as third and fourth together; rostrum not reaching the posterior coxæ, basal joint not quite reaching base of head; pronotum with the lateral margins serrate, the lateral angles prominently produced; scutellum longer than broad at base, the basal angles foveate; corium with the apical angle slightly produced, the inner apical margin rounded; mesosternum centrally sulcate; ventral spine short, not passing posterior coxæ; abdomen obtusely centrally sulcated.

336. **Degonetus serratus**, *Dist.* (Abeona?) *Tr. E. S.* 1887, p. 350.

Ochraceous, thickly and darkly punctate; connexivum reddish-ochraceous, with black linear spots near bases and apices of segmental incisures; antennæ with the first and second joints dark ochraceous, third and fourth luteous, with their apical halves blackish; pronotum with the lateral angles broadly produced and obtusely bispined; scutellum with a small foveate black spot in each basal angle; membrane pale fuliginous: body beneath, rostrum, and legs ochraceous; head with a black spot on each side near base of antenna: sternum coarsely punctate on lateral areas; abdomen obtusely centrally sulcated.

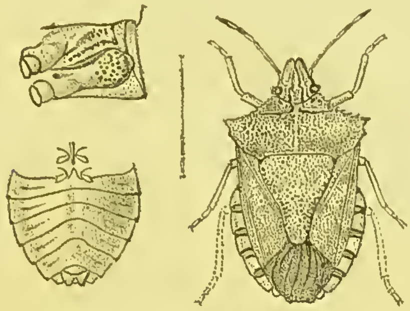

Fig. 131.—*Degonetus serratus.*

Length 12 to 14; breadth between pronotal angles 7 to 9 millim.

Hab. Bombay (*Coll. Dist.*).

Genus PLACOSTERNUM.

Placosternum, *Amy. & Serv. Hém.* p. 174 (1843).

Type, *P. taurus*, Fabr.

Distribution. India, Malay Peninsula, and China.

Body broad, robust: lateral margins of the head gradually rounded and entire, lateral lobes a little longer than the central, separate at their apices; antennæ with the basal joint not nearly reaching apex of head; rostrum about reaching the intermediate coxæ; pronotum broad, lateral margins dentate, lateral angles produced, their apices more or less truncate; mesosternum with a central prominent robust ridge terminating pointedly between the anterior coxæ, this ridge is posteriorly united to a central metasternal elevation which is sinuate behind and receives the short broad basal spine of the abdomen.

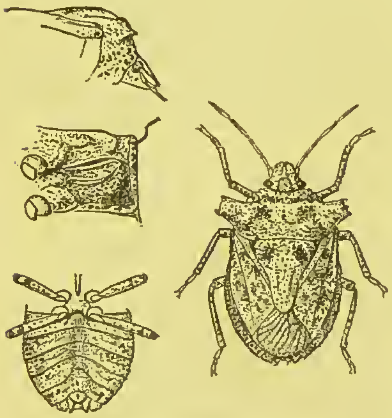

Fig. 132.—*Placosternum taurus.*

337. **Placosternum taurus**, *Fabr.* (Cimex) *Spec. Ins.* ii, p. 344 (1781); *id.* (Edessa) *Syst. Rhyng.* p. 145 (1803); *Amy. & Serv. Hém.* p. 174 (1843).

Ochraceous, coarsely blackly punctate, the punctures frequently confluent and forming irregular black spots or patches, of which the most prominent are two transverse and linear on anterior area, two irregularly rounded on disk of pronotum, and two on anterior area of scutellum; antennæ piceous, bases of the joints ochraceous: body beneath and legs as above; lateral areas of sternum and abdomen and abdominal incisures more or less confluently blackly punctate; the apices of the pronotal angles are truncate and bisinuate, thus being obtusely triangulate.

Length 24 to 25; breadth between pronotal angles 16 to 17 millim.

Hab. Sikhim. N. Khási Hills (*Chennell*). Cochin (*Coll. Dist.*). Burma; Bhamo (*Fea*).—Siam.

338. **Placosternum alces**, *Stål, En. Hem.* v, p. 107 (1876).

Closely allied to *P. taurus*, Fabr., and differing principally by he apices of the lateral pronotal angles, which are only unisinuate near anterior angle which is prominent; behind the sinuation the apices are somewhat obliquely truncate; other characters generally as in *P. taurus.*

Length 21 to 24; breadth between pronotal angles 16 millim.

Hab. Bombay (*Leith*); Bor Ghát (*Dixon*). Ceylon (*Green*).

"Near Bombay this species is common on the Banyan tree (*Ficus bengalensis*)."—*R. M. Dixon.*

339. **Placosternum urus**, *Stål, En. Hem.* v, p. 107 (1876).

P. urus is allied to the two preceding species and differs from both in the pronotal lateral angles, which are distinctly broader at apex than at base, where they are posteriorly sinuate, their apices are truncate and not so profoundly sinuate before the anterior angular tooth; the pronotum is more convex posteriorly, and the scutellum more deflected from basal area; the body is also smaller.

Length 18 to 20; breadth between pronotal angles 14 to 15 millim.

Hab. Khási Hills (*Chennell*); Nága Hills (*Doherty*). Ceylon (*Stockholm Mus.*).

340. **Placosternum cervus**, *Dist. Tr. E. S.* 1887, p. 352.

A species allied to the preceding, but to be recognized by the very widely and forwardly ascending pronotal angles; these, as in *P. urus*, are broadest at apices, and are deeply sinuate near the anterior and posterior angles, which are prominent, their central area being somewhat roundly truncate; the pronotal lateral angles are distinctly but shortly spinous.

Length 19; breadth between pronotal angles 17 millim.

Hab. Assam; Sadiya (*Chennell*).

341. **Placosternum dama**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 92 (1794); *id.* (Edessa) *Syst. Rhyng.* p. 147 (1803); *Stål, Hem. Fabr.* i, p. 34 (1868).

A species to be recognized by the more elongate body and the much less produced pronotal angles, which are sinuate near the anterior angle and then lobately rounded posteriorly; the lateral margins are simply crenulate; the antennal joints are piceous much speckled with ochraceous.

Length 18 to 20; breadth between pronotal angles 10 to 12 millim.

Hab. Pondicherry (*Stockholm Mus.*). Assam; Dikrang (*Atkinson Coll.*). Cochin (*Coll. Dist.*); Trivandrum.

342. **Placosternum obtusum**, *Montand. Ann. Soc. Ent. Belg.* xxxviii. p. 633 (1894).

A species I have not seen, described by Montandon from a female example and stated to differ from all the other species of the genus by its relatively narrower shape, and by the pronotal angles, which are very large but do not project so much as in the other species; they are bisinuated at their apices, the anterior lobe only spined and the median lobe very largely rounded.

Length 22; breadth between pronotal angles $16\frac{1}{4}$ millim.

Hab. Mysore.

A species apparently allied to *P. cervus*, Dist.

Division *RHYNCHOCORARIA*.

I use this name, employed already by Stål and Atkinson, in a somewhat different signification to theirs. In the *Rhynchocoraria* as here proposed, as in the last division, the abdomen is always more or less distinctly spined at base, sometimes longly so, in other genera the protuberance is more of an angulated tubercle; the pronotal angles are always more or less strongly produced, but the pronotal margins are entire and neither serrate nor dentate.

Synopsis of Genera.

A. Abdomen not furrowed.
- a. Basal margin of pronotum concave.
  - *a.* Abdominal basal spine or tubercle short.
    - *a'.* Mesosternal process extending between anterior coxæ .... RHYNCHOCORIS, p. 212.
    - *b'.* Mesosternal process extending throughout greater length of head .... VITELLUS, p. 214.
  - *b.* Abdominal basal spine very long.... LEOVITIUS, p. 215.
- b. Basal margin of pronotum straight .... SABÆUS, p. 216.

B. Abdomen with a broad basal furrow .... AMBLYCARA, p. 217

Genus RHYNCHOCORIS.

Rhynchocoris, part., *Westw. in Hope Cat.* i, p. 29 (1837); *Amy. & Serv. Hém.* p. 152 (1843); *Dall. List Hem.* i, p. 198 (1851); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 521.

Type, *R. humeralis*, Thunb.

Distribution. India, Ceylon, Burma, Malay Archipelago.

Body oblong-ovate, attenuated posteriorly; lobes of the head equal in length, lateral lobes usually a little longer than the central, sometimes apex of central a little prominent; rostrum of variable length, either nearly reaching the apex of the abdomen, or only extended to posterior coxæ or to about the base of the third abdominal segment; basal joint of antennæ not reaching apex of head; pronotum broad, with a subanterior marginal series of punctures, lateral margins sinuate, basal margin concave, posterior angles moderately produced and covering basal angles of scutellum, lateral angles strongly produced; lateral abdominal segmental angles dentately produced; scutellum large, triangular, rounded at the apex; abdominal basal spine short, inserted in a notch of the metasternal process; mesosternum profoundly ridged, the process extended between the anterior coxæ.

a. *Rostrum long, reaching apical abdominal segment.*

343. **Rhynchocoris humeralis**, *Thunb.* (Cimex) *Nov. Ins. Spec.* ii, p. 40, t. 2, f. 54 (1783); *Dall. List Hem.* i, p. 302 (1851); *Stål, Hem. Fabr.* i, p. 35 (1868).

Cimex hamatus, *Fabr. Mant. Ins.* ii, p. 286 (1787); *id.* (Edessa) *Syst. Rhyng.* p. 147 (1803); *Burm.* (Acanthosoma) *Hand. Ent.* ii, (1) p. 359 (1835).

Stoll, Pun. ff. 135 & 186 (1788).

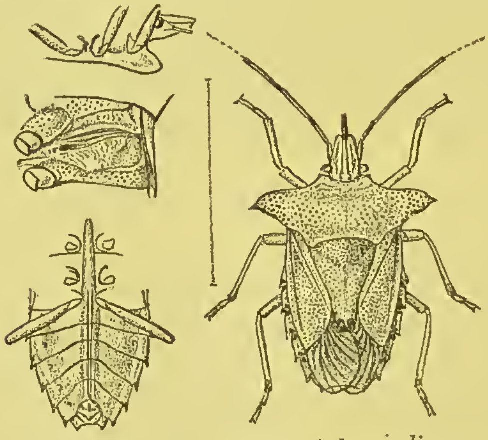

Fig. 133.—*Rhynchocoris humeralis.*

Ochraceous or greenish-ochraceous, coarsely punctate; antennæ fuscous, basal joint ochraceous streaked with fuscous; head with

the margins of the central lobe usually black on disk; pronotum with the lateral angles strongly produced and very coarsely blackly punctate, the apices recurved; scutellum with the apex much more finely punctate; connexivum with the segmental angles and a spot at base and apex of each incisure black: body beneath and legs luteous, stigmata and small lateral marginal spots black.

Length 21 to 24; breadth between pronotal angles 14½ to 16 millim.

Hab. North Khási Hills (*Chennell*). Sibságar (*Ind. Mus.*). Sikhim (*Atkinson Coll.*). Burma; Bhamo (*Fea*).—Also recorded from Siam.

344. **Rhynchocoris serratus**, *Don.* (Cimex) *Ins. Ind., Hem.* t. 8, f. 2 (1800); *Amy. & Serv. Hém.* p. 152, t. 3, f. 2 (1843); *Dall. List Hem.* i, p. 302 (1851).
Stoll, Pun. f. 3 (1788).

Olive-green or ochraceous; differing principally from the preceding species (*R. humeralis*) by the lateral angles of the pronotum, which are slender, acutely pointed, their apices very slightly recurved, black, or very coarsely blackly punctate; lateral margins of the lateral lobe of head profoundly black; connexivum unspotted, the segmental angles only black.

Length 20 to 24; breadth between pronotal angles 16 to 18 millim.

Hab. Malabar.—Found also in the Malay Peninsula, Java, Sumatra, Borneo, Philippines.

b. *Rostrum about reaching the third abdominal segment.*

345. **Rhynchocoris plagiatus**, *Walk.* (Cuspicona) *Cat. Het.* ii, p. 379. 2 (1867).
Rhynchocoris tabrobanensis, *Bergr. Rev. d'Entom.* x, p. 211 (1891).

Greenish or ochraceous, thickly and somewhat finely punctate, apex of scutellum much more obsoletely punctate; lateral margins of head and margins of central lobe black; pronotal spines much as in *R. serratus*, connexivum with the segmental angles black. Other characters generally as in *R. serratus*, from which the present species also differs by its smaller size and shorter rostrum, and by the lobes of head being equal in length. Abdomen above ochraceous, the apical area from about apex of scutellum purplish-black.

Length 14 to 18; breadth between pronotal angles 11 to 14 millim.

Hab. Nilgiri Hills (*Hampson*). Ceylon (*Green*).

c. *Rostrum about reaching the posterior coxæ.*

346. **Rhynchocoris alatus**, *Dist. Tr. E. S.* 1900, p. 172, pl. ii, f. 12.

Above pale greenish, thickly and coarsely punctate; lateral lobes of head and apical half of central lobe reddish-ochraceous;

margins of posterior portion of central lobe blackish; antennæ with the basal joint ochraceous, black beneath, second and third joints black, remainder in specimen described mutilated; basal lateral margins of the corium reddish-ochraceous; connexivum ochraceous with the segmental angles black; membrane bronzy-brown: body beneath and legs ochraceous with a greenish tint; tarsi fuscous; second joint of antennæ distinctly shorter than the third; central lobe reaching apex of head, which is rounded; lateral angles of the pronotum very strongly and robustly produced with their apices acute, the punctures on these processes being coarse and black; rostrum not quite reaching the posterior coxæ, its apex black.

Length 15; breadth between pronotal angles 13 millim.

Hab. Nága Hills (*Doherty*).

Genus VITELLUS.

Vitellus, *Stål, Ann. Soc. Ent. Fr.* 1865, p. 170.

Type, *V. insularis*, Stål, a species from the Fiji Islands.

Distribution. India, Malay Archipelago, and Australasia.

This genus is allied to *Rhynchocoris*, but is separated by the greater length of the mesosternal process, which is extended throughout the greater length of the head; the apex of the scutellum is more angulate, and the lateral abdominal segmental angles are less dentately produced.

347. **Vitellus orientalis**, *Dist. Tr. E. S.* 1900, p. 172, pl. ii, f. 11.

Green or ochraceous, the latter colour probably indicating faded specimens; abdomen above indigo-blue, connexivum

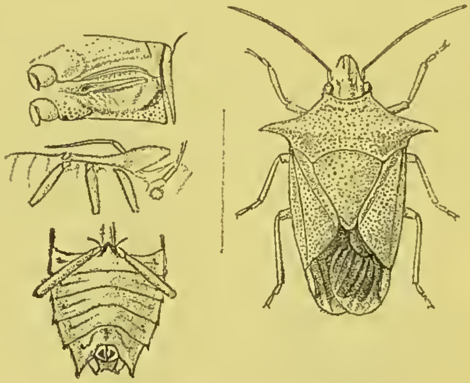

Fig. 134.—*Vitellus orientalis.*

ochraceous, apical segmental angles black; membrane pale fuscous, but reflecting the dark colour of the abdomen beneath: body beneath concolorous, the segmental incisures and linear stigmatal spots usually much darker or piceous; lateral posterior segmental

apices black; antennæ black, the basal joint ochraceous; second joint of antennæ a little shorter than third; head somewhat transversely wrinkled; pronotum coarsely punctate, the lateral angles produced into prominent robust acute spines, their apices slightly recurved; scutellum and corium coarsely punctate; basal lateral margin of corium sanguineous; apical angles of sixth abdominal segment strongly spinously produced.

Length 14 to 15; breadth between pronotal angles 10 to 12 millim.

Hab. Nilgiri Hills (*Hampson* and *Atkinson Coll.*).

Genus LEOVITIUS.

Leovitius, *Dist. A. M. N. H.* (7) v, p. 425 (1900).

Type, *L. macracanthus*, Dall.

Distribution. Northern India.

Head of moderate size, narrowed anteriorly, the lateral lobes scarcely passing the central and not meeting in front, which is thus obscurely notched; antennæ five-jointed, first joint not reaching apex of head, second much shorter than either third, fourth, or fifth joints, which are subequal in length; rostrum reaching the posterior coxæ, second joint much longer than the third, first joint not quite as long as the head; pronotum deflected anteriorly, the anterior margin strongly concavely sinuate, the lateral angles prominently, broadly, and obtusely produced; scutellum broad, the apex rounded; abdomen extending a little beyond the corium on each side, with a strong basal spine which passes the anterior coxæ.

348. **Leovitius macracanthus**, *Dall.* (Raphigaster?) *List Hem.* i, p. 289 (1851).

Ochraceous, very thickly and darkly punctate; scutellum with the punctures near apex distinctly darker; disk of corium irregularly tinged with castaneous; membrane fuliginous; lateral margins of the pronotum very narrowly (broadly at lateral angles), and basal lateral margins of corium, reddish-ochraceous, sprinkled with coarse black punctures; connexivum reddish-ochraceous, spotted olivaceous at bases and apices of segmental incisures: body beneath and legs ochraceous; prosternum and abdomen coarsely punctate; lateral margins of sternum reddish-ochraceous, sprinkled with

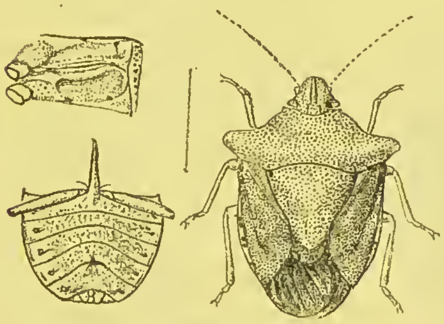

Fig. 135.—*Leovitius macracanthus.*

coarse black punctures; two black spots on each lateral area of the sternal incisures; stigmata black; ventral spine passing the anterior coxæ, its apex black. "Antennæ with the second joint very short, scarcely more than half the length of the third; the two basal joints testaceous; third joint black, with the base testaceous; fourth and fifth joints black, with their bases dull orange."

Length 11; breadth between pronotal angles 9 millim.

Hab. N. India (*Brit. Mus.*). Cachar (*Browning*).

Genus SABÆUS.

Sabæus, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 513.

Type, *S. spinosus*, Dall.

Distribution. Oriental Region.

Body obovate; head moderately inclined and gradually narrowed forwardly, lateral margins slightly sinuate, lobes of equal length; rostrum extending beyond the posterior coxæ; basal joint of antennæ reaching or slightly passing the apex of head; pronotum obliquely deflected anteriorly, its basal margin straight, lateral angles spinously produced; scutellum of moderate size, narrowed to apex; apical angle of corium rounded; mesosternum distinctly carinate; apical segmental angles moderately prominent; base of abdomen with a short obtuse tuberculous spine arising from the second segment.

349. **Sabæus humeralis**, *Dall.* (Rhaphigaster) *List Hem.* i, p. 278 (1851); *Dist. A. M. N. H.* (7) v, p. 393 (1900).
Sabæus spinosus (pt.), *Leth. & Sev. Cat. Gén. Hém.* t. i, p. 168 (1893); *Atk.* (pt.) *J. A. S. B.* lvii, p. 122 (1888).
Cuspicona smaragdina, *Walk. Cat. Het.* ii, p. 380 (1867).

Pale olivaceous-green, thickly and somewhat coarsely punctate, disks of lateral lobes to head and a spot behind base of each lateral pronotal angle reddish-ochraceous; membrane pale greenish subhyaline; body beneath and legs paler green, disk of sternum and abdomen suffused with ochraceous; antennæ with first, second, and third joints green, fourth and apex of third black; pronotal spines longly and acutely produced, coarsely punctate, their extreme apices black.

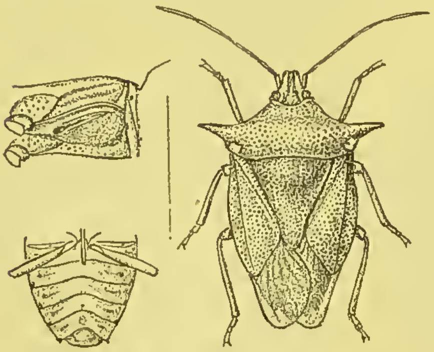

Fig. 136.—*Sabæus humeralis.*

Length 16½ to 17; breadth between pronotal angles 13 millim.

Hab. Assam (*Atkinson Coll.*). Sylhet and Burma (*Brit. Mus.*).—In my own collection is a specimen from China.

Genus AMBLYCARA.

Abeona, *Stål, En. Hem.* v, pp. 67 & 102 (1876), *nom. præocc.*
Amblycara, *Bergr. Rev. d'Entom.* x, p. 214 (1891).

Type, *A. gladiatoria*, Stål.

Distribution. India, Ceylon.

Head with the lateral margins nearly straight, the apex obtusely and broadly rounded; antennæ five-jointed, basal joint not reaching apex of head; pronotum with the lateral margins sinuate, callous and levigate in front of the lateral angles, which are acuminately produced, posterior margin straight, anterior margin moderately concave; corium with the costal margin at base callous and thence moderately rounded and amplified, narrowing again to apex; abdomen with a broad central furrow extending into the fourth segment, and terminating anteriorly in a short basal spinous tubercle.

350. **Amblycara gladiatoria**, *Stål* (Abeona), *En. Hem.* v, p. 102 (1876).

Pale ochraceous, thickly darkly punctate; head, anterior marginal area of pronotum, basal area of scutellum, continued in a central fascia towards apex, very palely castaneous or simply darker ochraceous; antennæ luteous, apices of third, fourth, and fifth joints broadly black; pronotum with the anterior lateral margins somewhat broadly levigate, luteous, the anterior margins of the pronotal spines black; connexivum black, very coarsely punctate, with its lateral margins ochraceous; membrane bronzy, its apical margins generally paler, its interior angles somewhat opaque: body beneath and legs ochraceous, stigmata black.

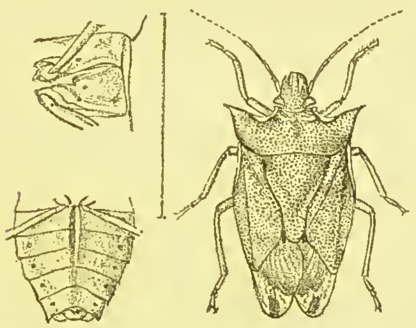

Fig. 137.—*Amblycara gladiatoria.*

Length 20 to 21; breadth between pronotal angles 12 to 13 millim.

Hab. India (*Vienna Mus.*). Ceylon (*Green*).

The specimen figured is a typical one kindly forwarded to me for that purpose from Vienna by Dr. Handlirsch; Stål's habitat "India Orientalis" is vague. I have received the species through Mr. Green from Ceylon.

Division *NEZARIA*.

In the *Nezaria* the pronotal angles are not produced but are rounded or subprominent, thus differing from the previous division. The abdomen is always more or less distinctly spined at base, and the head is moderately narrowed to apex and more or less sinuated at the lateral margins.

The genus *Catacanthus*, which is here included, is not strictly homogeneous, though agreeing in the divisional characters. In arranging the whole of the subfamily, I should place it in a group of genera not found in the fauna of British India, but consider it inexpedient to here make a division for a single genus.

Synopsis of Genera.

A. Abdomen obtusely or tuberculously spinous at base.
  a. Lateral margins of pronotum not, or, rarely, very slightly, reflexed.
    a. Abdomen not furrowed.
      a'. Head thickly punctate; abdomen punctate .... NEZARA, p. 219.
      b'. Head very sparsely punctate; abdomen subrugose, not punctate .... ZANGIS, p. 221.
    b. Abdomen furrowed .... JURTINA, p. 223.
B. Abdomen acutely spinous at base.
  b. Anterior tibiæ moderately dilated; lateral margins of pronotum reflexed .... CATACANTHUS, p. 218.
  c. Anterior tibiæ not dilated; lateral margins of pronotum not reflexed ...... PIEZODORUS, p. 224.

Genus CATACANTHUS.

Catacanthus, *Spin. Ess.* p. 352 (1837); *Dall.* (pt.) *List Hem.* i, p. 196 (1851).

Type, *C. incarnatus*, Dru.

Distribution. Oriental and Australasian Regions; also found in China and Japan.

Body ovate, beneath moderately convex; head with the lateral margins reflexed, lobes of equal length; antenniferous tubercles visible from above; antennæ five-jointed, basal joint extending a little beyond the apex of the head; pronotum with the anterior margin slightly elevated, lateral margins acute, reflexed; scutellum narrowed posteriorly; membrane extending considerably beyond the apex of the abdomen, veins numerous and simple; mesosternum somewhat obsoletely carinate; abdomen prominently spined at base; connexivum exposed beyond corium; anterior tibiæ moderately dilated.

351. **Catacanthus incarnatus**, *Dru.* (Cimex) *Ill.* ii, p. 67, pl. 36, f. 5 (1773); *Dall. List Hem.* i, p. 270 (1851).
Cimex nigripes, *Fabr. Syst. Ent.* p. 710 (1775); *Fabr.* (Edessa) *Syst. Rhyng.* p. 149 (1803).
Cimex melanopus, *Gmel. Syst. Nat.* i (4) p. 2149 (1788).

Cimex aurantius, *Sulz. Gesch. Ins.* p. 96, t. 10, f. 10 (1776).
Pentatoma aurantiacum, *Blanch. Hist. des Ins.* iii, p. 29, *Hem.* t. 6, f. 4 (1840-41).

Pale sanguineous, reddish-ochraceous, or luteous; head, antennæ, anterior and anterior lateral margins of pronotum, two basal spots to scutellum, a discal spot on each corium, the membrane, and a series of large spots to connexivum, bluish-black: body beneath ochraceous; legs, rostrum, anterior lateral margins of prosternum, a lateral spot on mesosternum, basal segment and large marginal spots to abdomen, bluish-black.

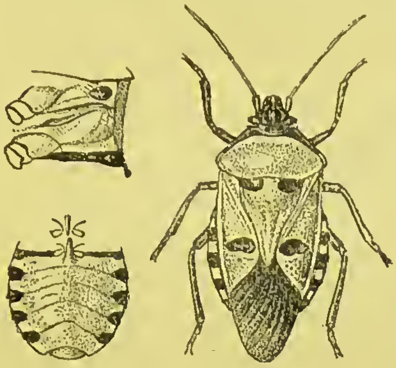

Fig. 138.—*Catacanthus incarnatus.*

Var. *a.* Scutellum without the basal spots.

Var. *b.* Both scutellum and corium unspotted.

Length 25 to 30 millim.

Hab. Sikhim. Assam; Khási Hills (*Chennell*); Margherita (*Doherty*). Calcutta; Karachi; Bombay (*Leith*); Kanara (*Coll. Dist.*); Malabar; Pondicherry; Ceylon (*Green*). Burma; Rangoon (*Coll. Dist.*); Bhamo (*Fea*); Tenasserim (*Ind. Mus.*).—Also largely distributed throughout the Malayan Archipelago; and reported from Japan and Corea.

352. **Catacanthus mirabilis**, *Dist. Tr. E. S.* 1901, p. 585, pl. xvi, f. 3, *a*, *b*.

Reddish-ochraceous; head, lateral and anterior margins of pronotum, two-thirds of the scutellum from base terminating in a lanceolate line, a large transverse rounded spot completely crossing corium a little beyond middle, sternum, disk of basal abdominal segment, and large lateral abdominal spots dark bluish-green; antennæ, legs, two discal spots to pronotum, a series of large marginal spots to connexivum, and central abdominal spots to abdomen, dark indigo-blue; membrane brassy-black; extreme apices of femora, coxæ, lateral margins of meso- and metasterna, posterior margin of metasternum, and basal abdominal spine, ochraceous.

Length 28 millim.

Hab. Travancore.

Genus NEZARA.

Nezara, *Amy. & Serv. Hém.* p. 143 (1843); *Stål, Hem. Afr.* i, pp. 82 & 192 (1864).
Rhaphigaster, *Dall.* (pt.) *List Hem.* i, p. 274 (1851).
Acrosternum, *Fieber, Eur. Hem.* pp. 78 & 329 (1861).
Subg. Pellæa, *Stål, En. Hem.* ii, p. 40 (1871).

Type, *N. viridula.*

Distribution. Almost universally distributed.

Body oval or obovate; head somewhat laterally sinuate, lobes of equal length; antennæ five-jointed, basal joint not reaching apex of head; pronotum with the lateral margins not or very rarely slightly reflexed, truncate behind the eyes; mesosternum moderately carinate; abdomen tuberculately spinous at base.

353. **Nezara viridula**, *Linn.* (Cimex) *Syst. Nat.* ed. 10, p. 444 (1758); *Stål, Hem. Afr.* i, p. 193 (1864).
Cimex smaragdula, *Fabr. Syst. Ent.* p. 711 (1775).
Cimex torquatus, *Fabr. Syst. Ent.* p. 710 (1775).
Pentatoma flavicollis & flavicornis, *Palis. de Beauv. Ins. Hém.* p. 185, t. 11, f. 4 (1805).
Pentatoma unicolor, oblonga, subsericea, leii, tripunctigera, proxima, chinensis, berylina, *Westw. in Hope Cat.* i, pp. 37, 38 (1837).
Pentatoma plicaticollis, *Lucas, Expl. Algér., Ins.* p. 87; *Hém.* t. 3, f. 9 (1849).
Pentatoma vicaria, *Walk. Cat. Het.* ii, p. 303 (1867).
For full synonymy *cf.* Dist. Biol. Centr.-Am., Rhynch. i, p. 78 (1880).

Pale or dark green, sometimes greenish-ochraceous, densely punctate; antennæ green, apices of the third and apical areas of fourth and fifth joints purplish-brown; extremity of segmental angles to abdomen black.

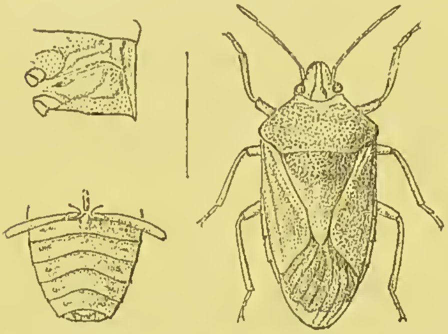

Fig. 139.—*Nezara viridula.*

Var. *a.* Head (excluding base) and anterior area and lateral margins of pronotum pale luteous.

Var. *b.* Above greenish-ochraceous; two spots at base of head, three spots on anterior area of pronotum, three basal and an apical spot to scutellum, and a discal spot on apical area of corium, green.

Length 12 to 16 millim.

Hab. Found throughout the whole of British India.—This species is also distributed throughout the Palæarctic, Nearctic, and Ethiopian Regions, and over a large portion of the Neotropical, Oriental, and Australasian Regions.

In India it has been found "on Potato-halms in Bangalore" (*J. Cameron*), and near Bombay "mostly on the leaves of *Gynandropsis pentaphylla*" (*R. M. Dixon*).

354. **Nerara antennata**, *Scott, A. M. N. H.* (4) xiv, p. 299 (1874).
Var. Nezara icterica, *Horv. Termesz. Füzetek*, xii, p. 31 (1889).
Var. Nezara balteata, *Horv. loc. cit.* p. 32.

A smaller and broader species than *N. viridula*, with the apex

of third and upper halves of fourth and fifth joints of antennæ black; the pronotum and scutellum are also subrugulose; other colour-markings as in *N. viridula.*

Horvath has also described (*supra*) similar colour varieties as occurring with the previous species.

Length 12 to 13 millim.

Hab. Himalaya (vide *Horvath*).—Originally described from Japan and received from China.

355. **Nezara graminea,** *Fabr.* (Cimex) *Mant. Ins.* ii, p. 295 (1787): *Stål* (Acrosternum), *Hem. Fabr.* i, p. 31 (1868); *Atk.* (Acrosternum) *J. A. S. B.* lvii, p. 118 (1888).
Cimex seladonius, *Fabr. Ent. Syst.* iv, p. 114 (1794).
Pentatoma lemur, *Dohrn, Stett. ent. Zeit.* xxi, p. 401 (1860); *Kirby, J. Linn. Soc., Zool.* xxiv. p. 84 (1891).

Above green or yellowish-green: thickly punctate; lateral margins of pronotum and basal lateral margins of corium luteous or yellowish-green: apex of scutellum with two small subcallous whitish spots: body beneath and legs pale greenish, legs more or less streaked and suffused with yellowish-green, disk of abdomen luteous; antennæ pale fuscous, bases of first, second, and third joints more or less distinctly pale greenish.

Length 7 to 9 millim.

Hab. Ootacamund and Calcutta (vide *Atkinson*). Ceylon (*Coll. Dist.*).

356. **Nezara nigromaculata,** sp. n.

Above pale green, somewhat coarsely punctate and obsoletely subrugulose; corium a little darker in hue; scutellum with a small shining black spot on each side a little before apex; lateral margins of pronotum, base of lateral margins to corium, and margins of connexivum narrowly luteous; membrane pale hyaline; antennæ pale greenish, fourth and fifth joints black: body beneath and legs very pale greenish or yellowish-green, the tarsi and apices of tibiæ black.

Length 8 millim.

Hab. Ceylon (*Lewis*).

Genus ZANGIS.

Zangis, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 514; *En. Hem.* v, p. 64 (1876).

Type, *Z. beryllus*, Fabr.

Distribution. Ethiopian, Oriental, and Australasian Regions; also found in China.

Closely allied to *Nezara* and separated by Stål on the following characters:—Abdominal basal tubercle very distinctly elevated, anteriorly angulated and somewhat compressed, about reaching the metasternum, which is elevated and usually sinuated posteriorly:

hemelytra above and beneath green; membrane entirely colourless; body more robust, a little less broadly obovate; abdomen aciculately subrugose, not punctate; head less punctate. In *Zangis* the colour of the species is also usually of a more intense and shining character.

357. **Zangis beryllus**, *Fabr.* (Cimex) *Mant. Ins.* ii, p. 292 (1787); *Stål, Hem. Fabr.* i, p. 33 (1868).

Suboval, palely and somewhat sordidly flavescent, shining, above less densely punctate; antennæ with the first and second joints pale green, third fuscous green at base, fourth and fifth testaceous yellowish-white at base; extreme margin of head, and two longitudinal lines, converging anteriorly and distant posteriorly, a small line before the ocelli, a line above the antenniferous tubercles, four minute spots on the anterior area of the pronotum, six in transverse series before middle, behind which are several arranged in undulating transverse series, four minute basal spots to scutellum, one marginal on each side before middle and several scattered on posterior area, spots and small transverse lines to exterior area of corium, spots to sternum, bases and apices of abdominal segmental angles, bases and apices of the incisures on connexivum, and apex of rostrum, black; membrane sordid hyaline; anterior lateral margins of pronotum and base of lateral margins to corium ochraceous.

Length 15; breadth 8 millim.

Hab. "Tranquebar."

I have not seen the typical form of this species; the above characters are from those given by Stål from an examination of the Fabrician type.

Var. **crassa**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 39 (1837); *Dall.* (Cuspicona?) *List Hem.* i, p. 297 (1851).

Green or brownish-ochraceous; head, anterior area and lateral margins of pronotum pale ochraceous.

Length 16; breadth between pronotal angles 10 millim.

Hab. Assam (*Coll. Dist.*).—I have seen several specimens of this variety from China, whence it was originally described.

358. **Zangis dorsalis**, *Dohrn* (Rhaphigaster), *Stett. ent. Zeit.* xxi, p. 401 (1860); *Kirby, J. Linn. Soc., Zool.* xxiv, p. 85 (1891).
Zangis virginea, *Stål, En. Hem.* v, p. 93 (1876).

Above bright pale olivaceous-green; pronotum and scutellum sparsely and coarsely punctate, corium thickly and more finely punctate; lateral margins of head and pronotum very narrowly piceous, within the dark margins is a pale submarginal fascia; apical margin of the scutellum and the connexivum pale yellowish-green; abdomen above pale purplish: body beneath and legs very pale green, disk of abdomen luteous; stigmata and some sternal

spots black; antennæ greenish-ochraceous; apex of third and apical halves of fourth and fifth joints pale castaneous.

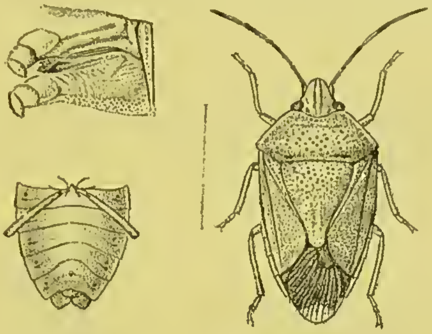

Fig. 140.—*Zangis dorsalis.*

In some specimens there is a distinct linear black marginal spot on each side of scutellum near apex and a black linear discal streak on corium.

Length 12 to 14 millim.

Hab. Ceylon (*Green*).

359. **Zangis albomaculata**, sp. n.

Pale grassy-green, very thickly and finely punctate; scutellum with two whitish marginal spots near apex; antennæ with the first, second, and third joints pale green (remaining joints mutilated in type); pronotum with two transverse spots on anterior area, four longitudinal on disk (of which the two central are smallest, and the outermost largest and broadest at base), and a rounded spot at each lateral angle, obscure pale olivaceous; abdomen above ochraceous: body beneath and legs pale greenish much suffused with ochraceous; apex of rostrum and apices of the segmental apical angles black; an obscure pale lateral submarginal fascia to pronotum.

Length 18; breadth between pronotal angles 10 millim.

Hab. Bombay (*Leith*).

Genus JURTINA.

Jurtina, *Stål, Öfv. Vet.-Akad. Förh.* 1867, p. 518.
Gastraulax, part., *Herr.-Schäff. Wanz. Ins.* vii, p. 61 (1844).

Type, *J. indica*, Dall.

Distribution. Madagascar and neighbouring islands, India, Malay Archipelago, and New Caledonia.

Head shorter than the pronotum, forwardly narrowed, the apex rounded, lobes of equal length; basal joint of antennæ not quite reaching apex of head; rostrum very long, sometimes almost reaching the apex of the abdomen; pronotum with the lateral margins almost straight, anterior margin truncate behind eyes,

lateral angles subprominent; scutellum of moderate size, subtriangular; mesosternum with a somewhat high carination or ridge, metasternum slightly elevated; abdomen with a deep and broad central furrow terminating at base in an obtuse tubercle or pine.

360. **Jurtina indica**, *Dall.* (Bathycœlia) *List Hem.* i, p. 270 (1851); *Kirby* (Bathycœlia), *J. Linn. Soc., Zool.* xxiv, p. 85, pl. iv, f. 15; *Stål, En. Hem.* v, p. 102 (1876).

Pale green or ochraceous, thickly and minutely punctate; lateral margins of the pronotum violaceous; scutellum with a subfoveate black spot with a pale levigate margin in each basal angle; corium with the base of lateral margins usually somewhat darker or more pronounced in hue; membrane transparent, colourless; body beneath and legs very pale ochraceous; sternum finely punctate, abdomen impunctate; antennæ with the first and second joints and base of third pale violaceous, remaining joints pale ochraceous.

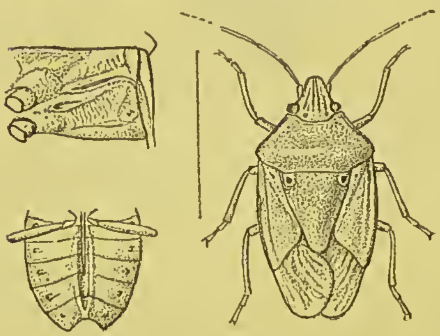

Fig. 141.—*Jurtina indica.*

Length 19 to 21 millim.

Hab. North India (*Brit. Mus.*). Bombay (*Leith*).

Genus PIEZODORUS.

Piezodorus, *Fieber, Eur. Hem.* pp. 78 & 329 (1861); *Stål, En. Hem.* ii, p. 44 (1872).

Type, *P. incarnatus*, Germ., a Palæarctic species.

Distribution. Generally distributed.

Body oblong, ovate; head short, slightly narrowed anteriorly, lateral margins moderately sinuate; antennæ five-jointed, basal joint not reaching apex of head; rostrum reaching or passing the intermediate coxæ; basal spine of abdomen acute and moderately long; extreme apex of clavus with a punctiform black or fuscous spot.

361. **Piezodorus rubrofasciatus**, *Fabr.* (Cimex) *Mant. Ins.* ii, p. 293 (1787); *Stål, Hem. Fabr.* i, p. 32 (1868).
Cimex hybneri, *Gmel. Syst. Nat.* i (4) p. 2151 (1788).
Cimex flavescens, *Fabr. Ent. Syst. Suppl.* p. 534 (1798).
Rhaphigaster flavolineatus, *Westw. in Hope Cat.* i, p. 31 (1837).
Rhaphigaster virescens, *Amy. & Serv. Hém.* p. 148 (1843).

Nezara pellucida, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 157 f. 26 (1862).
Rhaphigaster oceanicus, *Montr. Ann. Soc. Linn. Lyon,* (2) xi, p. 224 (1864).
Rhaphigaster extenuatus & pallescens, *Walk. Cat. Het.* ii, p. 371. 84, & iii, p. 568 (1867–8).

Above pale greenish, or luteous tinged with greenish, thickly punctate; pronotum with the lateral margins ochraceous or reddish-ochraceous, with a transverse pale or purplish fascia between the pronotal angles, where the punctures are more sparse; clavus with a small black apical spot; basal lateral margin of corium and the connexivum pale purplish or sanguineous; membrane colourless: body beneath and legs pale luteous, a little more coarsely punctate than above; antennæ with the apex of the third, sometimes the whole joint, and the fourth and fifth joints purplish.

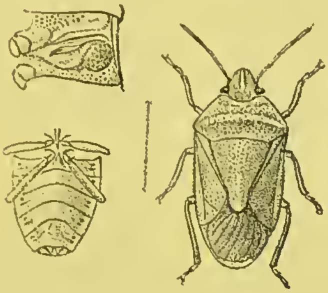

Fig. 142.
Piezodorus rubrofasciatus.

Length 8 to 10 millim.

Hab. Sikhim; Assam (*Atkinson*); Bengal. Bombay; Bor Ghát (*Dixon*). Ceylon (*Lewis*). Upper Burma (*Coll. Dist.*).—This species is also distributed throughout the Malay Peninsula and Archipelago, it is found in Japan, and is a somewhat common species in Australasia (I possess specimens from Tahiti). It has also been recorded, but I think erroneously, from Zanzibar and Abyssinia, the African species being apparently *P. pallescens*, Germ.

Division *MENIDARIA.*

This division as here understood embraces a number of genera which agree with the previous division *Nezaria* in having the lateral angles of the pronotum rounded or subprominent, and the abdomen always more or less distinctly spined at base, but differs by the shorter and broader head, which is neither distinctly narrowed to apex nor prominently sinuate at lateral margins.

Synopsis of Genera.

A. Head about as long as breadth between eyes, or not longer.
- a. Basal abdominal spine tuberculous, short.
  - *a.* Lateral margins of pronotum not sinuate.
    - a^1. Metasternum moderately elevated.
      - a^2. Head not reflexed at apex.
        - a^3. Rostrum reaching the posterior coxæ .... ACESINES, p. 231.
        - b^3. Rostrum reaching the intermediate coxæ .... DUNNIUS, p. 231.
      - b^2. Head reflexed at apex .... PATERCULUS, p. 233.

b. Basal abdominal spine variable in length.
  b^1. Metasternum not elevated .... MENIDA, p. 226.
  b. Lateral margins of pronotum sinuate .. DABESSUS, p. 234.
c. Basal abdominal spine long and slender, passing the intermediate coxæ .... CRESPHONTES, p. 235.
B. Head a little longer than the breadth between eyes .... PHAVORINUS, p. 236.

Genus MENIDA.

Menida, *Motsch. Ét. Ent.* x, p. 23 (1861); *Stål, En. Hem.* v, p. 97 (1876).
Stromatocoris, *Jakowl. Bull. Soc. Nat. Mosc.* 1876, p. 92.
Pygomenida, *Bredd. Ent. Nachr.* xxiv, p. 116 (1898).

Type, *M. violacea*, Motsch., from Eastern Siberia and Japan.
Distribution. Generally distributed.

Head broad, not much narrowed anteriorly, lateral margins scarcely sinuate; basal joint of antennæ not reaching apex of head; rostrum about extending to posterior coxæ; pronotum with the lateral margins nearly straight, the anterior and posterior margins very slightly sinuate; scutellum broad, subtriangular. Base of abdomen with a well-developed spine or tubercle arising from the second abdominal segment.

362. **Menida formosa**, *Westw.* (Pentatoma) *in Hope Cat.* i, p. 34 (1837); *Stål, En. Hem.* v. p. 99 (1876).
Rhaphigaster spectandus, *Stål, Freg. Eug. Resa, Ins. Hem.* p. 230 (1859).
Rhaphigaster albidens, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 159 (1862).

Shining dark castaneous, thickly punctate; head with three pale ochraceous lines and a small spot of the same colour before the eyes; pronotum with the anterior and lateral margins, two transverse annulations on anterior area followed by a waved fascia, ochraceous: scutellum with a large spot at each basal angle, sometimes connected at basal margin, and a large anchor-shaped apical spot, sometimes connected with the basal spots, ochraceous; corium with the basal lateral margin and a discal spot ochraceous; all the ochraceous markings levigate; membrane colourless: body beneath and legs ochraceous; the whole disk of sternum, sublateral margins and a central macular fascia to abdomen, castaneous; sternum coarsely punctate, abdomen sparsely and laterally punctate; apices of the anterior and intermediate tibiæ, apices of posterior

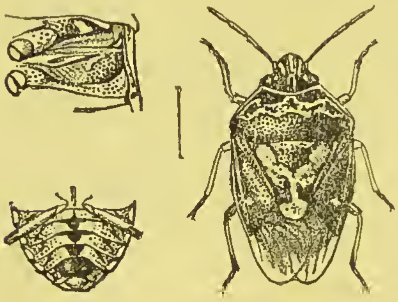

Fig. 143.—*Menida formosa.*

femora, bases and apices of posterior tibiæ, and the tarsi dark castaneous; ventral spine long and slender, just passing the intermediate coxæ; antennæ ochraceous, apex of third joint, and fourth and fifth joints excluding bases, fuscous.

Length 6 to 7 millim.

Hab. Sikhim (*Atkinson*). Bombay (*Leith*). Burma; Bhamo, Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Also distributed throughout the Malay Peninsula and some of the western islands of the Malayan Archipelago.

363. **Menida varipennis**, *Westw.* (Pentatoma) *in Hope Cat. Hem.* i, p. 43 (1837); *Dall.* (Rhaphigaster) *List Hem.* i, p. 286 (1851); *Bredd.* (Pygomenida) *Ent. Nachr.* xxiv, p. 116 (1898); *Stål, En. Hem.* v, p. 98 (1876).

Brassy-black, moderately punctate; head with three lines, the lateral ones dislocated, and a spot before each eye ochraceous; pronotum with the anterior and lateral margins, and an anterior discal fascia centrally broken, sometimes followed by some scattered linear markings, ochraceous; scutellum with a long irregularly oblique spot at each basal angle and the apex ochraceous or pale luteous; corium with a pale luteous discal spot, and the basal angle and margin dull ochraceous; all the pale markings levigate: body beneath black; legs ochraceous; lateral sternal margins, coxæ, lateral abdominal spots, two central discal series of spots (two in series or sometimes three), and the abdominal spine luteous; antennæ ochraceous. Abdominal spine reaching the intermediate coxæ.

Var. Corium dull ochraceous with the apical marginal area black.

Length 6 to 7 millim.

Hab. Sikhim (*Atkinson*). Khási Hills (*Chennell*). Tenasserim (*Atkinson*).—Also recorded from the Malay Peninsula and Java.

364. **Menida flavovaria**, *Dall.* (Rhaphigaster) *List Hem.* i, p. 288 (1851); *Stål, En. Hem.* v, p. 98 (1876).

Black, thickly and finely punctate; head with a few ochraceous dots, which are sometimes absent; pronotum with the lateral margins, a spot at the middle of the anterior margin, a transverse central discal spot (sometimes broken and sometimes absent), and a spot at centre of basal margin ochraceous; scutellum with a cruciform discal spot connected with base (sometimes broken), a spot at each basal angle, and the apical margin ochraceous; corium with a discal spot and base of lateral margin ochraceous; membrane pale fuscous hyaline: body beneath black; legs, basal abdominal spine, and rostrum ochraceous; lateral abdominal spots and lateral sternal margins luteous. Abdominal spine reaching the intermediate coxæ.

Length 6 to 8 millim.

Hab. Sikhim. Assam (*Atkinson*). Bombay (*Leith*).

365. **Menida apicalis**, *Dall.* (Rhaphigaster) *List Hem.* i, p. 285 (1851); *Stål* (Raphigaster), *En. Hem.* v, p. 129 (1876).

"Above pale greyish olive. Head with six black punctured lines on the anterior portion, which unite more or less on the vertex, making that part nearly black, with irregular pale spots. Pronotum rather thickly punctured with black, the punctures arranged somewhat in transverse lines, with the anterior portion of the disk blackish, the anterior and lateral margins with a narrow whitish edge. Scutellum rather thickly punctured with black, with a small orange spot in each basal angle, a large round black spot in the middle of the base, and a black spot on each lateral margin near the apex. Coriaceous portion of the elytra rather thickly punctured with black, with the apex and a submarginal spot near the middle black; membrane transparent, brownish. Margins of the abdomen variegated with black and yellow, very thickly punctured. Abdomen beneath greyish testaceous, with the sides rather thickly and strongly punctured with black; ventral spine long, reaching the intermediate coxæ. Breast testaceous, thickly punctured with black. Legs testaceous, thickly punctured with black; tarsi with the apical joint brown. Rostrum testaceous with the tip black. Antennæ with the three basal joints testaceous; fourth and fifth black, with the base testaceous." (*Dallas.*)

Length 9 millim.

Hab. North India (*Boys Coll.*, *Brit. Mus.*).

366. **Menida histrio**, *Fabr.* (Cimex) *Mant. Ins.* ii, p. 296 (1787); *Stål* (Antestia), *Hem. Fabr.* i, p. 34 (1868); *id. En. Hem.* v, p. 98 (1876).
Rhaphigaster concinnus, *Dall. List Hem.* i, p. 285 (1851).
Rhaphigaster strachioides, *Walk. Cat. Het.* ii, p. 365. 63 (1867).

Ochraceous, sparingly blackly punctate; head with the margins and four longitudinal lines blackly punctate; pronotum with an anterior submarginal black line and two transverse annulate black markings on anterior area; scutellum with a spot in each basal angle and the apex reddish ochraceous, an anterior discal spot and one on each lateral margin a little before apex black: corium with the disk more or less greyish-olivaceous, the apical area reddish-ochraceous, containing a black spot; connexivum ochraceous spotted with black; membrane colourless: body beneath, rostrum, and legs ochraceous; a broad sublateral margin to sternum and abdomen and a central abdominal series of spots black; antennæ ochraceous. Ventral spine reaching the intermediate coxæ.

Length 6½ to 8 millim.

Hab. Calcutta. Bangalore (*Ind. Mus.*). Burma; Bhamo, Schwego-Myo (*Fea*).—Also received from China and Formosa.

367. **Menida distincta**, *Dist. Tr. E. S.* 1879, p. 122; *id. Sec. Yarkand Miss., Rhynch.* p. 6, f. 3 (1879).

Luteous, covered with strong greenish-black punctures; head

with the lateral margins and four longitudinal furrowed punctured lines greenish-black; antennæ pilose, luteous, apex of the first joint and apical half of the third black; fourth and fifth black, narrowly luteous at base; rostrum luteous, apex piceous; pronotum with an anterior submarginal line of greenish-black punctures, and two transverse sub-annulate punctured spots of the same colour on anterior disk; scutellum with a large central subbasal greenish-black spot, and a small indistinct one of the same colour on each lateral margin a little before apex; membrane colourless: body beneath and legs luteous, sparingly punctured with black. Abdominal spine reaching the intermediate coxæ.

Length 6 millim.

Hab. Murree; Sind Valley, Kashmir (*Stoliczka*).

368. **Menida labecula**, *Dist. A. M. N. H.* (7) v, p. 396 (1900).

Ochraceous, thickly and coarsely brownly punctate; head with the lateral and basal margins and the margins of central lobe piceous; pronotum with two transverse foveate spots on anterior area; scutellum with a large discal castaneous spot near base and two smaller spots of the same colour near apex, behind which is a small linear spot, the apex paler and less punctate; connexivum ochraceous, spotted with castaneous: body beneath and legs ochraceous: lateral margins and apical segment of abdomen castaneous; a cluster of black punctures near anterior coxæ and some silky piceous transverse patches on lateral areas of meso- and metasterna; antennæ ochraceous, apical joint sometimes castaneous.

Length 5 millim.

Hab. Ceylon (*Green & Lewis*).

369. **Menida atkinsoni**, *Dist. Tr. E. S.* 1900, p. 171, pl. ii, f. 10.

Black; a central discal quadrate spot to pronotum, a large oblique spot near each basal angle of scutellum, apical margins of scutellum, narrow lateral margins to pronotum and corium, legs, abdominal spine, and a broken lateral linear margin to abdomen, ochraceous; antennæ ochraceous, basal and third joints somewhat infuscated, fourth and fifth joints mutilated in specimen described; the body above is thickly and coarsely punctate excepting the ochraceous markings, which are almost impunctate.

Length 6 millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*).

370. **Menida rubriplaga**, *Walk.* (Rhaphigaster) *Cat. Het.* ii, p. 365 (1867).

Stramineous; posterior area of pronotum and the corium coarsely punctate; head, anterior area of pronotum, and scutellum finely punctate; a transverse fascia between pronotal angles, two central basal and two subapical spots narrowly connected to scutellum, and apical angles of corium pale sanguineous: body

beneath and legs stramineous; stigmata and small marginal spots to abdomen black; tarsi and antennæ ochraceous. Ventral spine reaching the intermediate coxæ.

Length 7 millim.

Hab. Sind (*Coll. Dist.*). "Hindostan" (*Brit. Mus.*).

371. **Menida bisignata,** *Walk.* (Rhaphigaster) *Cat. Het.* ii, p. 366 (1867).

"Testaceous, elongate-elliptical, thickly and minutely punctured; punctures black; antennæ black, first and second joints tawny; thorax transversely and very slightly impressed in front, a transverse triangular black mark with a testaceous disk on each side in front of the impression; scutellum less thickly punctured than the thorax, a blackish dot on each side near the tip; abdomen black; connexivum testaceous; underside with two testaceous stripes which do not extend to the tip; ventral spine obtuse, extremely short, not extending to the hind coxæ; femora and tibiæ with tawny tips; corium with a brown apical patch which is bordered on its inner side by an incomplete whitish band, the latter not punctured; membrane lurid." (*Walker.*)

Length 6 millim.

Hab. "Hindostan" (*Brit. Mus.*).

372. **Menida elongata,** sp. n.

Black, somewhat thickly punctate, more sparingly so on corium and apical half of scutellum; antennæ black; pronotum with the lateral margins narrowly, some transverse spots on the posterior disk, and a small spot at each lateral angle ochraceous; scutellum with a small spot at each basal angle, a cluster of irregular spots on posterior half, and the apex ochraceous; corium ochraceous, sparingly blackly punctate, punctures somewhat confluent on disk, apical area black; membrane very pale ochraceous: body beneath and legs black; coxæ, basal halves of femora, abdominal marginal spots, and six spots arranged in pairs on anterior segments of abdomen luteous; rostrum black, with its two basal joints luteous; abdominal basal spine in type injured by pinning, but apparently short.

Length 7 millim.

Hab. Burma; Teinzo (*Coll. Dist.*).

A narrow elongate species, in shape and form somewhat resembling the African *M. loriventris*, Germ.

Stål (En. Hem. v, p. 98, 1876) described a species under the name of *M. signoretii* with the habitat "India orientalis. Potius Africa?" This, pending verification of the locality, cannot at present be included in the Indian fauna.

Genus ACESINES.

Acesines, *Stål, En. Hem.* v, p. 94 (1876).

Type, *A. breviceps*, Stål.

Distribution. As yet recorded only from India.

Head short, almost equally long and broad between the eyes, broadly rounded at the apex, obsoletely punctured, lateral margins not sinuated; pronotum obsoletely punctate at the narrow anterior levigate margin and at the somewhat acute and narrowly reflexed lateral margins; scutellum of moderate size, shorter than the corium; rostrum not passing the posterior coxæ; mesosternal ridge gradually thickened posteriorly; metasternum moderately elevated. Abdomen with a distinct basal tubercle or spine which touches the metasternum; membrane with five veins.

373. **Acesines breviceps**, *Stål, En. Hem.* v, p. 94 (1876).

Oval, somewhat depressed, obscurely ochraceous, above and on sternum distinctly and rather densely blackly punctate, the punctures arranged in lines and groups leaving small irregular and confluent smooth spots; anterior margin and an obsolete longitudinal line on pronotum, also an intermediate spot on basal area of scutellum, very much less punctate; lateral areas of under surface of abdomen finely darkly punctate; a sublateral streak, the sixth segment, and anal valvules blackish; abdomen above, membrane, and the last two joints of the antennæ fuscous; tibiæ minutely speckled with fuscous.

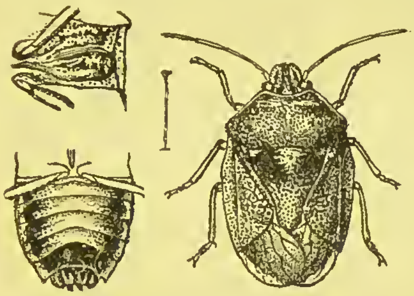

Fig. 144.—*Acesines breviceps.*

Length 9; breadth 6 millim.

Hab. "India" (*Stockholm Mus.*).

I am indebted to Dr. Aurivillius for the opportunity of figuring this species.

Genus DUNNIUS, nov.

Type, *D. fulvescens*, Dall.

Distribution. India, Burma, and Ceylon.

Somewhat broadly ovate; head broad, rounded, lobes of about equal length, margins rounded, eyes transverse; first joint of antennæ about reaching apex of head, third, fourth, and fifth joints pilose; pronotum moderately gibbous at base, deflected towards head, lateral margins oblique, posterior angles rounded; scutellum longer than half of abdomen, narrowed posteriorly; rostrum reaching the intermediate coxæ, second joint a little longest; mesosternum with a distinct keel or ridge, narrowed in front, not

extending beyond anterior coxæ; metasternum with a central cruciform process not notched posteriorly. Second abdominal segment with a central short, broad, obtusely spinous tubercle about reaching the metasternal process.

374. **Dunnius fulvescens**, *Dall.* (Rhaphigaster) *List Hem.* i, p. 283 (1851); *Dist.* (Plexippus) *A. M. N. H.* (7) v, p. 387 (1900).

Ochraceous, sparingly but somewhat coarsely blackly punctate; antennæ ochraceous, third, fourth, and fifth joints pilose; membrane pale fuscous: body beneath and legs pale ochraceous; sternum sparingly coarsely blackly punctate; abdomen obsoletely punctate, the punctures concolorous, four obsolete longitudinal series a little darker; stigmata black; legs speckled with black; scutellum with a small black spot in each basal angle.

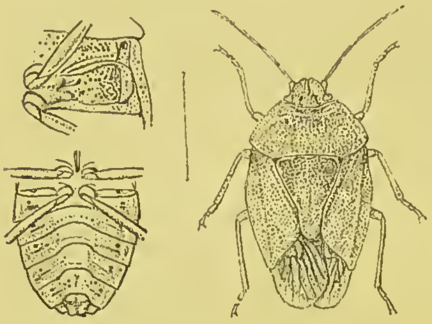

Fig. 145.—*Dunnius fulvescens.*

Var. *a.* Scutellum with four indistinct black basal spots between the angular spots, and a larger blackish spot on each lateral margin a little before apex.

Var. *b.* Scutellum unspotted, but the corium with an elongate irregularly shaped black discal spot on anterior area; second and third joints of antennæ subequal in length.

Length 11 to 13 millim.

Hab. Sikhim; Mungphu (*Atkinson*). Burma; Bhamo, Teinzo, Rangoon, Karennee (*Fea*).

375. **Dunnius sordidus**, *Kirby* (Rhaphigaster), *J. Linn. Soc., Zool.* xxiv, p. 86 (1892); *Dist.* (Araducta) *A. M. N. H.* (7) v, p. 427 (1900).

"Greenish testaceous, thickly covered with small brown or reddish-brown punctures over the whole of the upper surface and on the pectus; scutellum reddish, a little greener on the sides before the extremity, which is rather broad and obtusely rounded; a small black spot at the basal angles of the scutellum; abdomen beneath with an irregular band of black blotches on each side of the central line, meeting in a black patch on the penultimate segment; there is also a zigzag series of narrower reddish or blackish submarginal markings; terminal segment ending in four pointed cones of nearly uniform size. Shoulder angles not very prominent. Antennæ slender, unicolorous, as long as the width of the thorax." (*Kirby.*)

Length 11 millim.

Hab. Ceylon; Pundaloya (*Green*).

376. **Dunnius bellus**, *Dist.* (Araducta) *A. M. N. H.* (7) v, p. 427 (1900).

Ochraceous, thickly and coarsely blackly punctate, the black punctures generally more prominent between the humeral angles of the pronotum and most prominent on the scutellum, where they form a broad and very irregular longitudinal fascia; corium with a distinct discal levigate spot a little before apex; membrane brassy-black, its apical margin pale fuscous: body beneath and legs pale ochraceous; sternum and abdomen broadly laterally punctured with black, these punctures forming a submarginal fascia, preceded by a distinct segmental row of spots and outwardly margined by small spots at the apices of the abdominal incisures; a central spot on the apical segment, and sometimes some spots on basal segments—all these black markings are variable in intensity in different specimens; legs punctured with black, particularly the femora; antennæ pale ochraceous; second joint of antennæ much shorter than the third.

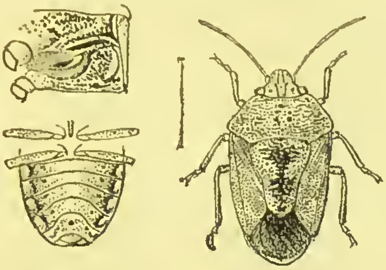

Fig. 146.—*Dunnius bellus.*

Length 8 to 10 millim.

Hab. Ceylon (*Green and Atkinson Coll.*).

Genus **PATERCULUS**, nov.

Type, *P. affinis*, Dist.

Distribution. Himalayas, Burma.

Allied to *Dunnius*, from which it differs by the lateral lobes of the head being distinctly longer than the central with their apices distinctly reflexed, basal joint of antennæ not quite reaching apex of head; pronotum with the lateral margins straighter and with a distinct ridge between the lateral angles, from which it is obliquely deflected towards head; rostrum reaching the posterior coxæ; membrane short. Abdomen with a short basal spinous tubercle about reaching the metasternal process.

377. **Paterculus affinis**, *Dist.* (Plexippus) *A. M. N. H.* (7) v, p. 387 (1900).

Dull ochraceous, thickly and darkly punctate, the coloration distinctly darker on the head and anterior half of pronotum; body beneath and legs very pale ochraceous; abdominal stigmatal spots black, a castaneous spot on apical segment; abdomen above reddish-ochraceous, the apical area violaceous; connexivum darkly punctate, with small black marginal spots at incisures; antennæ fuscous, apical joint ochraceous, apices of fourth and fifth joints piceous, second joint much shorter than the third, third and fourth subequal

in length; pronotum with the lateral margins distinctly piceous, the anterior lateral and anterior margins narrowly ochraceous; rostrum reaching the posterior coxæ.

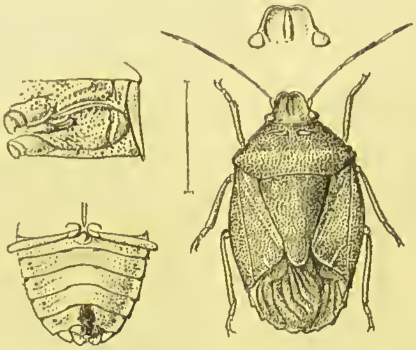

Fig. 147.—*Paterculus affinis.*

Length 11 millim.

Hab. Sikhim (*Atkinson Coll.*). Nága Hills (*Coll. Dist.*).—Also received from West Yunnan.

378. **Paterculus vittatus,** *Dist.* (Plexippus) *Tr. E. S.* 1901, p. 109.

Dull ochraceous, thickly and darkly punctate, the coloration distinctly darker on the head and anterior half of pronotum, which is separated by a transverse levigate fascia: body beneath pale ochraceous, the lateral areas of the sternum, a longitudinal fascia on each side of abdomen, the stigmata, and a spot on apical segment piceous; legs ochraceous; antennæ ochraceous, apex of third, more than apical half of fourth, and apical half of fifth joint piceous, second and third joints subequal in length.

Length 11 millim.

Hab. Burma; Karennee (*Fea*).

Genus **DABESSUS**, nov.

Type, *D. repellens*, Kirby.

Distribution. Ceylon, Malay Peninsula.

Body elongate; head broad, rounded in front, lobes of almost equal length, margins slightly reflexed; basal joint of antennæ stout, not reaching apex of head; rostrum not quite reaching the posterior coxæ; pronotum with the lateral angles concavely sinuate, a small blunt tooth near each anterior angle, the posterior angles prominently and subacutely produced; scutellum with its apical third narrowed and extending beyond the middle of abdomen, which is posteriorly narrowed and has the apical angles of the sixth segment prominently and angularly produced, second segment with a distinct tubercle; mesosternum with a narrow central keel, metasternum with a central cruciform process.

This genus will include *Araducta malayana*, Dist.

379. **Dabessus repellens**, *Kirby* (Rhaphigaster), *J. Linn. Soc., Zool.* xxiv, p. 86, pl. iv, f. 9 (1892); *Dist.* (Araducta) *A. M. N. H.* (7) v, p. 427 (1900).

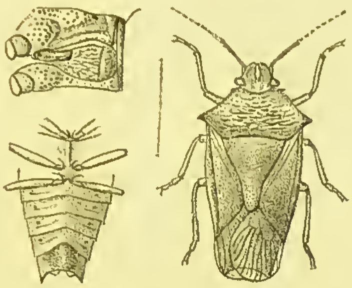

Fig. 148.—*Dabessus repellens.*

"Rather long and narrow; very dark reddish-brown above and reddish below; legs and antennæ rufo-testaceous, upper surface somewhat rugose and thickly punctured; angles of the pronotum short, distinct, straight, pointed at the tip, but not very acutely, and the extreme point pale; membrane fuscous or fusco-hyaline. Pectus thickly punctured; ventral surface of abdomen much more finely; subterminal segment of abdomen with strong sharp lateral projections." (*Kirby.*)

Length 11 millim.

Hab. Ceylon; Pundaloya (*Green*).

Genus CRESPHONTES.

Cresphontes, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 514; *id. En. Hem.* v, p. 95 (1876).

Type, *C. monsoni*, Westw.

Distribution. At present recorded only from India and Java.

Body broadly obovate; head moderately narrowed forwardly but scarcely sinuate at lateral margins, about as long as broad between eyes; rostrum extending to the posterior coxæ; antennæ moderate, first joint not quite reaching the apex of head, second shorter than third; pronotum moderately deflected, anterior margin not elevated, lateral angles obtusely, broadly subprominent; scutellum somewhat broad at apex, moderately long, frena extending a little beyond its middle; apical margin of corium rounded; mesosternum distinctly carinate. Abdomen armed at base with a long spine, extending beyond the intermediate coxæ.

380. **Cresphontes monsoni**, *Westw.* (Rhaphigaster) *in Hope Cat.* i, p. 31 (1837); *Dist. P. Z. S.* 1900, p. 814, pl. lii, f. 6.

Cresphontes nigro-maculatus, *Hagl. Stett. ent. Zeit.* xxix, p. 157 (1868).

Cresphontes rufescens, *Bredd. Deutsche ent. Zeitschr.* 1900, p. 163.

Pale flavescent or stramineous, blackly punctate, the punctures on head and pronotum arranged in patches, margins and apex of scutellum densely punctate; corium somewhat rufescent, densely punctate; abdomen above, first and second joints of antennæ,

bases of remaining joints, connexivum, and legs more or less rufescent; third, fourth, and fifth joints of antennæ, a somewhat smooth median shining spot on scutellum and some minute spots on sternum and abdomen, duplicated spots on connexivum, also spots on the apices of the femora, black; membrane and wings fuscescent; basal angle of membrane with an obscure spot.

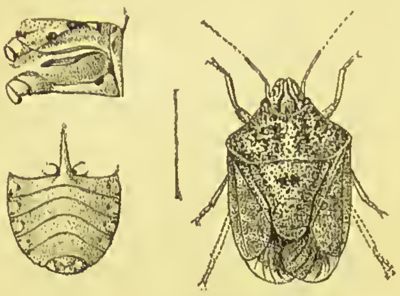

Fig. 149.—*Cresphontes monsoni.*

Length 9 to 12; breadth 7 to 7½ millim.

Hab. Deccan (*Stockholm Mus.*).—Java.

Westwood originally described the habitat of his species as "Caput Bonæ Spei," an undoubted error. I have been enabled to compare the types of both Westwood's and Haglund's species, which I found identical, with a Javan specimen collected by Horsfield, and cannot accept the proposition of Breddin that examples from that island constitute a distinct species.

Genus PHAVORINUS, nov.

Type, *P. afflictus*, Walk.

Distribution. India.

Head longer than broad, lobes of about equal length, but the lateral lobes a little curved inwardly at their apices, lateral margins moderately reflexed and ampliated; ocelli a little farther apart from each other than from eyes; rostrum about reaching the posterior coxæ, second joint slightly longer than the third; antennæ with the first joint shorter than the head, but about reaching its apex, second joint a little shorter than the third (remainder mutilated); pronotum truncate behind the eyes, the anterior angles extending laterally beyond them and each armed with a short spinous tubercle, lateral margins obliquely straight; scutellum of moderate size, about reaching the fifth abdominal segment; margins of the corium moderately rounded, but not the margin of the abdomen; mesosternum broadly sulcated, the sulcation containing a narrow carination. Abdomen with a short obtuse basal spine.

381. **Phavorinus afflictus**, *Walk.* (Strachia) *Cat. Het.* ii, p. 332 (1867).

Body above olivaceous-green, thickly and coarsely punctate: margins of lateral lobes and apical half of central lobe to head, eyes, inner area of corium, membrane, two apical spots to scutellum,

abdomen above, body beneath, and legs ochraceous; a single lateral spot to metasternum, two lateral spots to pro- and mesosterna,

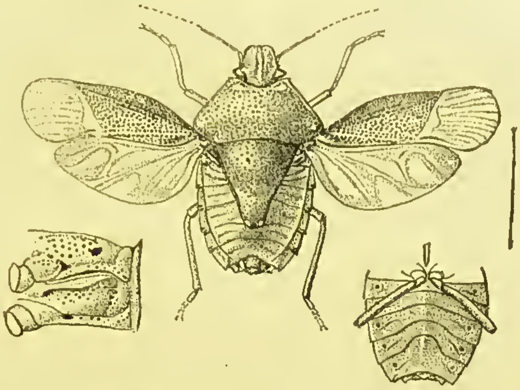

Fig. 150.—*Phavorinus afflictus.*

and the abdominal spiracles black; antennæ ochraceous, apices of second and third joints infuscated (remaining joints mutilated).

Length 15; breadth between pronotal angles 8 millim.

Hab. "India" (*Brit. Mus.*).

The figure is taken from Walker's unique type in the British Museum.

Division *DIPLOSTIRARIA.*

A small division to be recognized by the concavely excavated posterior margins of the pronotum; the lateral pronotal angles are only subprominent, and the abdomen is more or less prominently spined at base.

Synopsis of Genera.

Base of abdomen obtusely spined; meso- and metasterna with two prominent median ridges	DIPLOSTIRA, p. 237.
Base of abdomen with a long spine extending to head; mesosternum finely ridged or carinate ..	AMBIORIX, p. 239.

Genus **DIPLOSTIRA.**

Diplostira, *Dall. List Hem.* i, p. 300 (1851); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 522.

Carenoscaptus, *Sign. Ann. Soc. Ent. Fr.* (2) ix, 1851, p. 341.

Type, *D. valida*, Dall.

Distribution. At present known only from Sikhim and Assam.

Body elongate, broadest across the pronotal angles; head large, longer than broad, lateral margins very obsoletely sinuate, lobes of

equal length, punctures arranged in longitudinal series; antennæ five-jointed, basal joint very short, not nearly reaching apex of head; rostrum stout and reaching the base of abdomen; pronotum somewhat strongly deflected in front, lateral margins almost straight, basal margin concave, lateral angles subprominent; meso- and metasterna with two prominent central ridges or carinations, between which is a deep furrow occupied by the rostrum; lateral margins of the corium oblique; membrane large with longitudinal veins, posterior angles to abdominal segments moderately angulately produced. Abdomen with a central ridge and an obtuse basal tubercle or spine.

382. **Diplostira valida**, *Dall. List Hem.* i, p. 301, pl. 10, f. 5 (1851).
Carenoscaptus maculipes, *Sign. Ann. Soc. Ent. Fr.* (2) ix, 1851, p. 341, pl. x, f. 10.

Luteous, shining, more or less punctured with castaneous; head with the lateral margins and six punctate longitudinal lines black; antennæ ochraceous; pronotum very coarsely punctate, the punctures confluent on posterior half, which has thus a distinct castaneous coloration; scutellum luteous, very sparingly punctate,

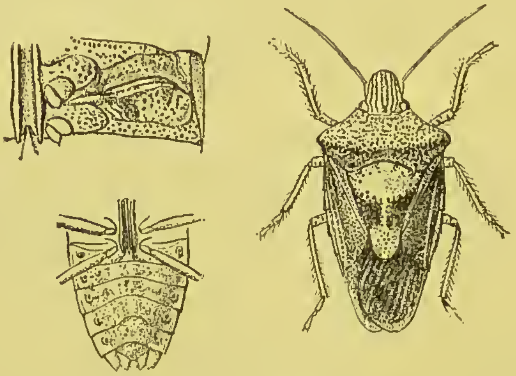

Fig. 151.—*Diplostira valida.*

the punctures mostly at basal and lateral areas and on apical half, where there are two distinct elongate spots a little beyond centre; corium pale castaneous, thickly punctate, the lateral area ochraceous, more sparingly castaneous punctate; membrane shining pale fuscous: body beneath and legs pale ochraceous; tibiæ streaked and femora spotted with black; sternum coarsely, abdomen very finely punctate; stigmata centrally black.

Length 25 to 27; breadth between pronotal angles 13 to 14 millim.

Hab. Sikhim, Assam; Khási Hills (*Chennell*).

Genus AMBIORIX.

Ambiorix, *Stål, En. Hem.* v, p. 100 (1876).

Type, *A. æenescens*, Stål.

Distribution. At present known only from North India.

Apical angles of the sixth abdominal segment produced in a large obtuse tooth; abdomen gradually narrowed, sides somewhat straight; basal abdominal spine extending to the head, gradually compressed and acuminate; anterior lateral margins of the pronotum and the anterior margin behind the vertex levigate, the former straight; lateral angles subprominent, obtusely rounded; frena extending beyond the middle of the scutellum; corium a little longer than the scutellum, apical margin rounded; mesosternum finely ridged or carinate; tibiæ above slightly furrowed; rostrum reaching the posterior coxæ.

383. **Ambiorix æenescens**, *Stål, En. Hem.* v, p. 100 (1876).

Greyish-flavescent, shining; beneath with legs somewhat ferruginous, above distinctly and densely, blackly punctate; more sparingly punctate beneath; second and third joints of antennæ black; head, anterior area of pronotum, rounded basal spot and

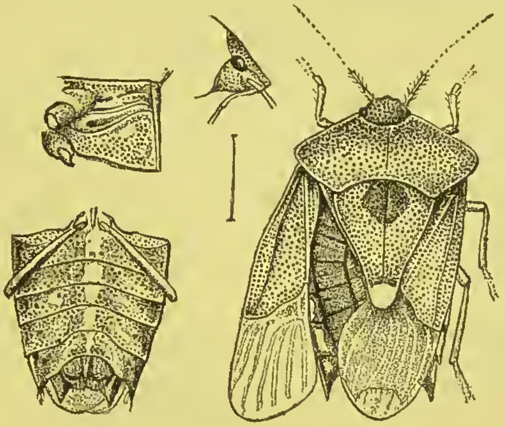

Fig. 152.—*Ambiorix æenescens.*

band before apex of scutellum, basal costal area of corium, and markings to connexivum, brassy; abdomen above obscure violaceous; membrane with an obscure colourless apical spot; extreme apical margin of head, anterior and lateral pronotal margins pale levigate; abdomen in female acutely quadridentate at apex.

Length $9\frac{1}{2}$; breadth $5\frac{1}{2}$ millim.

Hab. North India (*Vienna Mus.*).

I have not seen this rare species, the type of which was in too fragile a condition for transit. Dr. Handlirsch, however, kindly had a drawing of the specimen made for me, which is here reproduced (fig. 152).

Division EURYASPISARIA.

This division concludes the British Indian Pentatominæ so far as our present knowledge obtains. The principal character is found in the scutellum, which is large and broad, its lateral margins nearly straight, the apex broadly rounded. The base of the abdomen is always more or less spinously produced.

Synopsis of Genera.

Scutellum occupying about three-fourths of the abdomen. Abdominal spine short, reaching the metasternal process	EURYASPIS, p. 240.
Scutellum reaching apex of abdomen. Abdominal spine long, reaching, or nearly reaching, the intermediate coxæ	BRACHYCORIS, p. 241.

Genus EURYASPIS.

Eurysaspis, *Sign. Ann. Soc. Ent. Fr.* (2) ix, 1851, p. 342.
Euryaspis, *Stål, En. Hem.* v, p. 95 (1876).

Type, *E. transversalis*, Sign.
Distribution. Ethiopian Region and India.

Scutellum large, occupying more than three-fourths of the abdomen, very broad and rounded; lobes of the head equal in length; rostrum not quite reaching the posterior coxæ; eyes stout; ocelli approximate to the eyes; antennæ five-jointed, the third and fourth joints longest; pronotum very tumid and forwardly inclined, lateral angles rounded; membrane extending beyond the abdomen; mesosternum with a broad central elevated ridge narrowed forwardly and terminating between the anterior coxæ; metasternum elevated, slightly notched posteriorly to receive the short abdominal basal spine.

384. **Euryaspis transversalis**, *Sign. Ann. Soc. Ent. Fr.* (2) ix, 1851, p. 343, pl. 10, f. 11.

"Yellow, varied with brown and paler yellow; head small, yellow, with the lateral margins sinuated, the sinuosity black, and also the inner margins of the lobes, the area of the ocelli, and the posterior margin; pronotum medianly divided by a sinuated fascia of a paler yellow, almost white, between the pronotal angles, the anterior area yellow and the posterior area brownish; scutellum with a yellow surface anteriorly defined by a circular fascia which is much paler and almost white, and contains posteriorly a large reddish-brown spot, surrounded by yellow and strongly punctured above on both sides; corium brownish yellow; membrane transparent with seven or eight veins, slightly bifurcate;

Fig. 153. *Euryaspis transversalis.*

body beneath and legs yellow; abdomen with four brown fasciæ; stigmata small and black."

Length 9 millim.

Hab. Pondicherry.

I only know this species by Signoret's description and figure, both of which are here reproduced.

Genus BRACHYCORIS.

Brachycoris, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 633.

Type, *B. semiflavus*, Stål, from the Philippine Islands.

Distribution. Oriental Region.

Broadly oval, subrotundate, above and beneath moderately convex, thickly punctate; head moderately small, lateral margins sinuate near eyes, lobes of about equal length or lateral lobes very slightly longer; rostrum reaching the posterior coxæ; antennæ robust, first joint not quite reaching apex of head, third joint incrassated at apex, fourth and fifth joints somewhat strongly incrassated; pronotum broad, anteriorly deflected, lateral margins acute, anterior angles acutely produced, lateral angles rounded, not prominent; scutellum large, reaching the apex of the abdomen, near base on each side sinuated, apex rounded; membrane extending beyond abdominal apex, the veins simple; mesosternum obsoletely sulcated; basal abdominal spine long, reaching or nearly reaching the intermediate coxæ.

385. **Brachycoris insignis,** *Dist. A. M. N. H.* (7) v, p. 420 (1900).

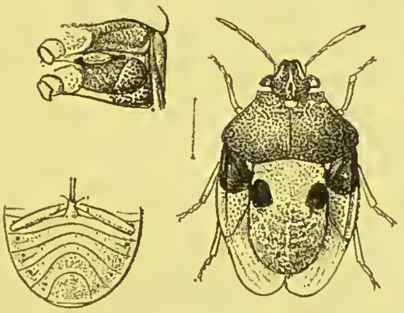

Fig. 154.—*Brachycoris insignis.*

Head and pronotum black, very coarsely punctate and rugulose; head with two small central spots near base, and pronotum with three transverse spots near anterior area, ochraceous; scutellum ochraceous, sparingly but coarsely punctate on basal area, more thickly and brownly punctate on posterior area; a spot in each basal area, a larger spot in each lateral margin before middle, and a smaller, often obscure discal spot between them, black; corium ochraceous, broadly black at base, brownish towards apex; connexivum, body beneath, and legs ochraceous; head and wide margins of pro- and mesosterna black, lateral margins of metasternum widely castaneous; stigmatical abdominal spots fuscous; antennæ brownish ochraceous, the last two joints piceous; rostrum ochraceous, its apex piceous.

Var. *a*. More than basal half of scutellum and basal third of corium black; scutellum with three small ochraceous spots, one central and one in each basal angle.

Var. *b*. Pronotum ochraceous, concolorous with scutellum or slightly shaded with castaneous.

Length 5; breadth between pronotal angles $3\frac{1}{2}$ to 4 millim.

Hab. Ceylon (*Atkinson Coll.*). Burma; Rangoon, Pegu, Palon (*Fea*), Karen Hills (*Doherty*).—Also received from Borneo.

Genera and Species of Pentatominæ *recorded from India but not included in this volume.*

Cuspicona antica, Voll. Versl. Akad. Wet. Amst., Nat. (2) ii, p. 188 (1868).

Vollenhoven recorded this species as from "Hindostan." I have no corroboration of this habitat and only possess the species from the Malay Peninsula.

Cuspicona curtispina, Stål (*Hoffmanseggiella*), Stett. ent. Zeit. xxii, p. 144 (1861).

Recorded by Atkinson (J. A. S. B. 1888, p. 148) as from "Burma (?)." A Javan species only according to present knowledge.

Cuspicona virescens, Dall. List Hem. i, p. 296 (1851).

Recorded by Atkinson (*loc. cit.*) as from Burma. I can find no confirmation for the habitat. Found in Java.

Actuarius albonotatus, Westw. (*Pentatoma*) in Hope Cat. i, p. 37 (1837); Dist. P. Z. S. 1900, p. 815, pl. lii, f. 11.

Westwood gave the habitat of this species as "Gambia." Stål (En. Hem. v, p. 126, 1876) transcribed the locality erroneously as "Bengalia;" and Atkinson following Stål (J. A. S. B. 1888, p. 161) added the species as of "doubtful position" to those included in his enumeration of Indian Rhynchota.

Gen. ? *Pentatoma lateralis*, Westw. in Hope Cat. i, p. 43 (1837); Dist. P. Z. S. 1900, p. 818, pl. liii, f. 9.

The typical and only specimen of this species which I have seen is in a bad condition with the rostrum wholly absent. Generic identification is impossible till other specimens are obtained. It was recorded as "Habitat in Bengalia."

Mormidea nigriceps, Walk. Cat. Het. iii, p. 554 (1868).

The type of this species—recorded as from Hindostan—is in the Melbourne National Museum. Nothing is known of it in this country. The genus *Mormidea* is not found in India and the species is probably known under another name.

Rhaphigaster patulus, Walk. Cat. Het. ii, p. 366 (1867).

The type of this species—recorded from North Hindostan—is no longer to be found. Without the type, Walker's species may be regarded as non-existent.

Subfamily VI. ASOPINÆ.

Antennæ of five joints, basal joint very short, not passing the apex of the head; rostrum long, passing or reaching the intermediate coxæ, very robust, basal joint incrassated, inserted at labrum; anterior tibiæ usually with a small spine on the inner surface, frequently obscure and sometimes obsolete.

The Asopinæ are most poorly represented in the Nearctic and Palæarctic Regions, they are fairly numerous in the Ethiopian and Oriental Regions, but they attain their maximum in specific representation and their richest colouring in the Neotropical Region.

Little is recorded as to their habits, but one species (*Canthecona furcellata*) is predatory on other insects, as is detailed under the description of that species.

Synopsis of Genera.

A. Anterior femora with a prominent spine.
- a. Abdomen with a short basal single spine.
  - *a*. Anterior tibiæ strongly dilated.
    - a^1. Lateral pronotal margins neither crenulate nor dentate.
      - a^2. Scutellum longer than broad.
        - a^3. Head as long as pronotum ...... CECYRINA, p. 244.
        - b^3. Head short, not nearly so long as pronotum; intermediate and posterior femora spined before apex ...... CAZIRA, p. 245.
      - b^2. Scutellum short, as broad as long; intermediate and posterior femora unarmed ...... BLACHIA, p. 247.
  - *b*. Anterior tibiæ moderately or obsoletely dilated.
    - b^1. Lateral pronotal margins crenulate or dentate ...... CANTHECONA, p. 248.
  - *c*. Anterior tibiæ not dilated.
- b. Abdomen with a short bifid spine at base .. GLYPSUS, p. 251.
- c. Abdomen practically unarmed at base .... PICROMERUS, p. 251.

B. Anterior femora unarmed.
- a. Lateral pronotal angles more or less produced.
  - *a*. Head long, much longer than broad .... AUDINETIA, p. 252.
  - *b*. Head about as long as broad ...... PODISUS, p. 253.
- b. Lateral pronotal angles rounded, not produced.
  - *a'*. Second joint of antennæ more than twice as long as third ...... ASOPUS, p. 254.
  - *b'*. Second joint of antennæ very little longer than third ...... ZICRONA, p. 255.

Genus CECYRINA.

Cecyrina, *Walk. Cat. Het.* i, p. 118 (1867).

Type, *C. platyrhinoides*, Walk.

Distribution. British India.

Elongate-ovate; head very long, about as long as the pronotum, a little sinuate in front of eyes, the lateral lobes much longer than the central and meeting beyond it, their margins very slightly reflexed and their surface obsoletely concave, apex truncate; antennæ with the second and third joints subequal in length or second very slightly shorter than third, fourth and fifth joints distinctly incrassated; pronotum longitudinally ridged and rugulose at basal area, lateral margins strongly sinuated, the lateral angles a little prominent; scutellum centrally and laterally ridged, rugulose, much longer than broad at base, its apex truncately rounded; corium a little longer than scutellum, its apical margin rounded; membrane extending beyond the apex of abdomen; anterior tibiæ much dilated, anterior femora prominently spined before apex; second abdominal segment produced in a short obtuse basal spine.

386. **Cecyrina platyrhinoides,** *Walk. Cat. Het.* i, p. 119 (1867).

Dark brownish-ochraceous; the head somewhat thickly punctate, pronotum and scutellum rugose and punctate; corium much irrorated with pale ochraceous and sparingly punctate; central lobe to head, anterior margin and two more or less distinct oblique fasciæ on each lateral area of the pronotum, and a more or less distinct angulated submarginal fascia on basal two-thirds of scutellum pale luteous, levigate; apical margins of scutellum and corium also distinctly paler; membrane brassy-brown; sternum and abdomen beneath very coarsely punctate and mottled with ochraceous; antennæ very pale castaneous, fourth and fifth joints piceous, fourth moderately dilated and broadly luteous at base; rostrum castaneous, its apex piceous.

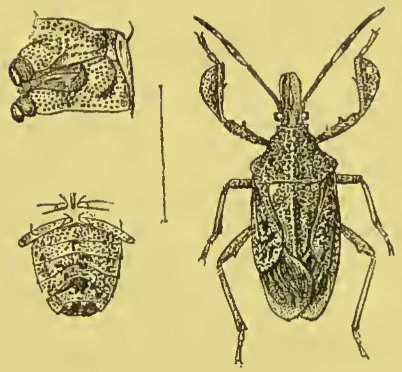

Fig. 155.—*Cecyrina platyrhinoides.*

Length 12 to 16; breadth between pronotal angles 5 to 7 millim.

Hab. Nága Hills (*Chennell*). Cachar (*Coll. Dist.*).

Genus CAZIRA.

Cazira, *Amy. & Serv. Hém.* p. 78 (1843); *Dall. List Hem.* i, p. 76 (1851); *Stål, Hem. Afr.* i. p. 62 (1864).

Type, *C. verrucosa*, Westw.

Distribution. Oriental Region.

Body somewhat short and stout; head somewhat long, lobes about equal in length, their apices obscurely lobate; lateral margins sinuate; antennæ five-jointed, the basal joint not reaching apex of head; pronotum strongly rugose, the lateral margins broadly sinuate, anterior angles obscurely spinous, lateral angles spinously produced; scutellum gibbous and lobately tuberculous at base, longer than broad at base, its apex subtruncate; corium more or less rugulose; membrane extending considerably beyond the apex of abdomen; abdomen with a distinct abdominal spine about reaching the posterior coxæ; anterior tibiæ strongly dilated, femora with a prominent spine before apex.

387. **Cazira verrucosa,** *Westw.* (Pentatoma) *Zool. Journ.* v, p. 445, pl. xxii, f. 7 (1835); *Dall.* (Cazira) *List Hem.* i, p. 82 (1851), excl. syn. *Linnæi.*

Asopus verrucifer, *Burm. Handb.* ii, p. 380 (1835).

Reddish-ochraceous, punctured with fuscous; head, pronotum, and scutellum rugosely tuberculate; pronotum somewhat tessellately rugose, the lateral angles produced into short obtuse spines, notched on their posterior margins; scutellum with two large and prominent convex tubercles on basal area, apical area concave; corium smooth punctate, the costal area rugose; connexivum with the margins broadly crenulate; legs pale castaneous, intermediate and posterior femora and tibiæ annulated with white.

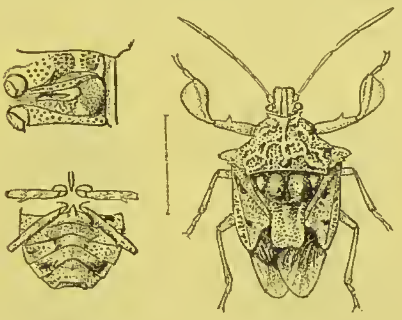

Fig. 156.—*Cazira verrucosa.*

Var. The reddish-ochraceous coloration replaced by piceous.

Length 10 to 11; breadth between pronotal angles 6 to 7 millim.

Hab. Sikhim. Assam; Khási Hills (*Chennell*); Nága Hills and Margherita (*Doherty*). Calcutta (*Atkinson Coll.*). Malabar (*Coll. Dist.*). Burma: Schwego-Myo, Bhamo, Karennee, Palon (*Fea*). Tenasserim; Meetan, Thagata (*Fea*).

388. **Cazira similis,** sp. n.

Allied to *C. verrucosa*, colour more ochraceous or luteous; upper surface less tuberculate and rugose; lateral angles of pronotum

shorter, their posterior apical margins oblique, not notched; basal tubercles to scutellum distinctly surmounted with a small shining tubercle.

Length $8\frac{1}{2}$ to 11; breadth between pronotal angles 5 to 6 millim.
Hab. Nága Hills (*Doherty*).

389. **Cazira friwaldskyi**, *Horv. Termesz. Füzetek*, xii, p. 33 (1889).

Shining, punctate, verrucose: head black, with a percurrent longitudinal line, lateral lobes and basal joint of antennæ rufo-testaceous; pronotum black, distinctly punctate, with four tubercles in transverse series on anterior area, their apices fusco-cinnamomeous, the anterior and lateral spinous angles, a median rugose longitudinal callosity, terminating before the posterior margin in a conical tubercle, and the posterior rugose area rufo-testaceous; the anterior lateral margins very slightly denticulate *, the posterior area with seven tubercles, four anterior and three posterior, and a discoidal transverse callosity which is on each side recurved; scutellum with large elevated tubercles, rugosely punctate, black, slightly variegated with testaceous, apical area fuscously punctate: corium fusco-cinnamomeous, moderately punctate, with an oblong shining-fuscous impunctate spot near middle, costal area strongly rugose and punctate.

I have not seen this species, but the above characters taken from Horvath's description are apparently quite sufficient for its identification.

"Length ♀ 10 millim."
Hab. Western Himalaya (*Nat. Mus. Budapest*).

390. **Cazira ulcerata**, *Herr.-Schäff.* (Asopus) *Wanz. Ins.* iv. p. 103, f. 452 (1839), and vii, p. 114 (1844): *Dall. List Hem.* i. p. 82 (1851).

Sanguineous; antennæ, a discal spot to corium, tarsi, and apex of posterior tibiæ black: intermediate and posterior tibiæ annulated with white. Considerably resembling *C. verrucosa*, but more elongate, differently coloured, lateral punctate angles more produced and broader at apices; scutellum longer, ridges on apical half more pronounced; membrane brown, with a whitish spot at about centre of outer margin.

In a Calcutta specimen in my own collection the antennæ are not entirely black, the first, second, and third joints being sanguineous.

Length 8 to 12 millim.
Hab. Sikhim and Calcutta (*Coll. Dist.*). Coromandel (*Herr.-Schäff.*).—Also recorded from Siam and Hong Kong.

* This is a somewhat obsolete structural character.

Genus BLACHIA.

Blachia, *Walk. Cat. Het.* i, p. 117 (1867).
Sesha, *Dist. Tr. E. S.* 1887, p. 343.

Type, *B. ducalis*, Walk.
Distribution. Sikhim; Assam; Burma; Siam.

Head somewhat long and prominent, concavely sinuate at lateral margins, lobes about equal in length, lateral lobes with their margins distinctly raised and carinate; pronotum with the disk gibbous, the margins carinate, the anterior angles obtusely spinous, the lateral angles somewhat longly spinous, the anterior margin concave, lateral margins broadly sinuate; scutellum short and broad, about as long as broad at base, its apex broadly rounded; corium a little longer than scutellum, its lateral margin centrally ampliated, its apical margin rounded; membrane extending considerably beyond the apex of abdomen; rostrum reaching the intermediate coxæ: anterior tibiæ strongly dilated, anterior femora with a prominent spine before apex; metasternum elevated; mesosternum centrally carinate. Abdomen with a short abdominal spine arising from the second segment.

391. **Blachia ducalis**, *Walk. Cat. Het.* i, p. 117 (1867).
Sesha manifesta, *Dist. Tr. E. S.* 1887, p. 343, pl. xii, f. 2.

Body above pale stramineous, with the following dark blue shining spots—two at base of head attached to eyes, five on pronotum (two anterior and three posterior), four on scutellum (two basal and two subapical), and two on corium (one at about centre and the other at apex); membrane pale fuscous hyaline, dark bluish at base, the apex fuscous: body beneath dark bluish; antennæ, rostrum, legs, prosternum, lateral margins of abdomen narrowly, and some irregular lateral spots, a central longitudinal macular abdominal fascia, and terminal segment stramineous; prosternum with a dark blue transverse spot on each lateral area; pronotum and scutellum coarsely, corium somewhat finely punctate.

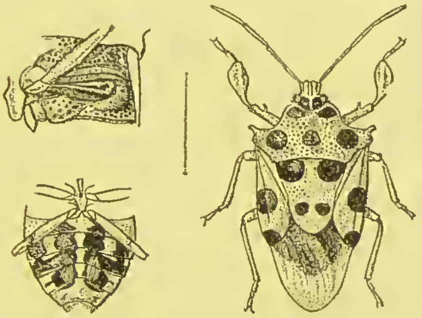
Fig. 157.—*Blachia ducalis.*

Length 11; breadth between pronotal angles 8 millim.

Hab. Sikhim. Nága Hills (*Doherty*). Burma; Karennee (*Fea*). Originally described from a specimen collected in Siam by Mouhot.

Genus CANTHECONA.

Canthecona, *Amy. & Serv. Hém.* p. 81 (1843); *Dall. List Hem.* i, p. 76 (1851); *Stål, Hem. Afr.* i, p. 62 (1864).

Type, *C. discolor*, Palis. de Beauv., an African species.

Distribution. Ethiopian, Oriental, and Australasian Regions.

Elongately-ovate; head rather flat, lobes about equal in length, margins concavely sinuate in front of eyes, antennæ with the basal joint not nearly reaching apex of head; pronotum with the lateral margins sinuate, the anterior portion finely crenulate, anterior angles slightly spinous, posterior angles spinously produced; scutellum longer than broad; anterior tibiæ moderately or obsoletely dilated; anterior femora with a prominent spine before apex; metasternum elevated, mesosternum centrally carinate. Abdomen armed with a short central basal spine.

392. **Canthecona furcellata**, *Wolff* (Cimex), *Ic.* v, p. 182, pl. xviii, f. 176 (1801); *Dall. List Hem.* i, p. 91 (1851).
Asopus armiger, *Herr.-Schäff. Wanz. Ins.* vii, pp. 113 & 119, f. 711 (1844).

Ochraceous, somewhat thickly darkly punctate, the punctures bronzy; head with the punctures somewhat confluent, and with a central pale fascia; antennæ ochraceous, about apical halves of the third, fourth and fifth joints fuscous; pronotum with a broken transverse fascia on anterior area, some more or less distinct longitudinal fasciæ on anterior half, and the lateral angles bronzy-black; scutellum bronzy-black at base, with a somewhat large levigate spot at each basal angle; corium with bronzy-black suffusions; connexivum coarsely punctate, with large subquadrate bronzy-black spots: body beneath and legs ochraceous, lateral areas of head, sternum, and abdomen blackly punctate; marginal spots to abdomen, annulations to femora near apices, apices of tibiæ, and a central spot on apical segment black; lateral pronotal margin anteriorly finely dentate, pronotal angles with their apices bifid, the anterior spine much the longest.

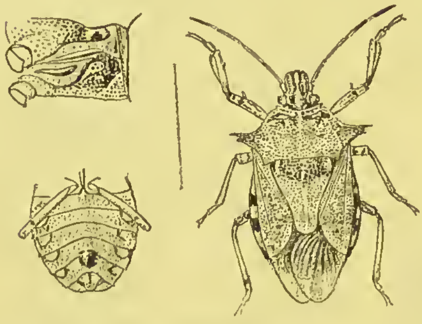

Fig. 158.—*Canthecona furcellata.*

Length 15 to 16; breadth between pronotal angles 7 to 8 millim.

Hab. Bengal; Calcutta (*Atkinson*); Ranchi (*Irvine*). Bombay (*Leith*). Madras (*Coll. Dist.*). Ceylon (*Green*). Burma; Bhamo, Teinzo, Karennee (*Fea*).—Java.

The late Mr. De Nicéville informed me that in Calcutta Mr. Peal found this species attacking the larva of *Hyblæa puera*, Cram., a

Noctuid moth. According to Mr. Atkinson it attacks and destroys the Tusser silkworms feeding in the open (Ind. Mus. Notes, i, p. 126, ii, p. 165).

393. **Canthecona tibialis**, *Dist. A. M. N. H.* (5) iii, p. 46 (1879).

Head brassy-black, very thickly punctured, with an obscure basal linear luteous spot; antennæ pale brownish, third and fourth joints blackish with their bases brown, fifth black with basal third luteous; pronotum brassy-black, coarsely punctate, slightly rugulose, with a central longitudinal line and irregular luteous markings which faintly indicate four longitudinal striæ; lateral angles produced into short, black, obtuse spines, strongly emarginate at apex; scutellum with the basal area brassy-black, thickly punctate, apical area paler and more sparingly punctate, with a small central basal spot, a large rounded spot in each basal angle, a small irregular and indistinct mark beneath these, and the apex broadly luteous; corium luteous, thickly blackly punctate, on the *underside* at apex is a large reddish spot; membrane fuscous, with two large whitish marginal spots: body beneath and legs luteous; sternum and lateral abdominal areas thickly blackly punctate, and a large central black spot on apical segment; apices of femora, the anterior tibiæ, bases and apices of intermediate and posterior tibiæ, and the anterior tarsi black; anterior tibiæ moderately dilated.

Var. *a*. Colour brownish in place of brassy-black.

Length 14 to 17; breadth between pronotal angles 8 to 9 millim.

Hab. Khási Hills (*Chennell*). Burma; Bhamo (*Fea*).

394. **Canthecona binotata**, *Dist. A. M. N. H.* (5) iii, p. 47 (1879).

Luteous, thickly punctured with brown; lateral lobes of head thickly punctured with brassy-black; antennæ with the first and second joints luteous, third and fourth fuscous, luteous at base; rostrum luteous with the apex reddish; pronotum considerably deflected from base towards head, with a central raised longitudinal line continued throughout the scutellum, lateral margins with an indistinct, obscure, violet submarginal fascia and some indistinct striæ of the same colour on disk, lateral angles produced into short obtuse black spines, emarginate and luteous at apices; scutellum more thickly and darkly punctate at basal area; corium with a subcostal blackish spot a little beyond the middle; membrane blackish, with the apical half whitish: body beneath and legs pale luteous; sternum with a violaceous streak on the lateral area of each segment, lateral abdominal margins with a series of subquadrate green spots, a submarginal series of narrow transverse waved dark lines, and a large subapical blackish spot; anterior tibiæ moderately dilated, their apical halves and bases and apices of intermediate and posterior tibiæ blackish.

Length 15; breadth between pronotal angles 7½ millim.

Hab. Nága Hills (*Chennell*).

395. **Canthecona robusta**, *Dist.* (Picromerus) *A. M. N. H.* (5) iii, p. 48 (1879).

Somewhat of the elongated form of *Audinetia spinidens* (p. 253), but with the pronotum robust and deflected anteriorly, the body narrowed posteriorly. Luteous, thickly brownly punctate; rostrum luteous with the apex pitchy; antennæ with the second and third joints pale luteous, third joint with the apex piceous (remaining joints mutilated in type); pronotum much narrowed anteriorly and widened posteriorly, with an indistinct central longitudinal line, a transverse series of four small luteous spots situate a little behind a somewhat obscure transverse ridge, lateral angles produced into long black-pointed spines, toothed behind, which gives them the appearance of being emarginate at apex; scutellum with a small luteous spot in each basal angle, and a central double levigate impression on apical half; corium with purplish reflections towards apex; membrane fuscous, with a whitish spot on outer and inner margins (size of these spots variable): body beneath luteous, punctured and mottled with brown; tibiæ brownish, with their apices a little darker.

Length 11 to 14; breadth between pronotal angles 6½ to 9 millim.

Hab. Assam; Sadiya (*Chennell*).—I have also received this species from South-east New Guinea.

396. **Canthecona cognata**, *Dist. Ent. Month. Mag.* xix, p. 157 (1882).
Canthecona insularis, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 79, pl. iv, f. 4 (1891).

Allied to the preceding species (*C. robusta*) but smaller; pronotum less deflected anteriorly; anterior lateral margins of pronotum distinctly luteous, pronotal lateral angles almost straight, black, with their apices emarginate.

Length 13; breadth between pronotal angles 8 millim.

Hab. Ceylon (*Green & Lewis*). — Originally described from Sumatra.

397. **Canthecona parva**, sp. n.

Ochraceous, thickly brownly punctate; head with the margins of the lateral lobes, basal margin, and an elongate spot near inner margin of eyes black; antennæ brownish, the bases of the fourth and fifth joints luteous; pronotum with a distinct central levigate line, the lateral angles castaneous and longly produced, slightly directed forward, apices emarginate, the anterior spine much the longest; scutellum castaneous at base, with a luteous levigate spot near each basal angle; corium finely punctate, the costal area a little before apex castaneous; membrane pale castaneous, with a large greyish spot on outer and apical margins: body beneath and legs ochraceous; lateral areas of abdomen and sternum darkly punctate; abdominal margin darkly spotted, and with a curved

linear black spot before the stigmata; apices of femora and a spot on apical segment black.

Length 9 to 10; breadth between pronotal angles $5\frac{1}{2}$ to 6 millim.

Hab. Bengal. Mysore (*Coll. Dist.*).

The small size of this species and its longly developed lateral angles render its identification somewhat easy.

Genus **GLYPSUS**.

Glypsus, *Dall. List Hem.* i, pp. 76 & 93 (1851); *Stål, Hem. Afr.* i, pp. 62, 63 (1864).

Type, *G. vigil*, Germ., an African species.

Distribution. An Ethiopian genus, with one species recorded from India.

This genus is to be recognized by the possession of a bifid spine at the base of the abdomen; the head has the lateral lobes longer than the central lobe and generally meeting beyond it; the anterior lateral margins of the pronotum are denticulated and with the lateral angles strongly, robustly, and obtusely spinously produced; anterior femora prominently spined near apex, and anterior tibiæ with a prominent inner spine.

398. **Glypsus fuscispinus**, *Stål, En. Hem.* i, p. 47 (1870).

Weakly greyish-flavescent, distinctly darkly punctate; antennæ pale ferruginous; pronotum with four very minute spots in transverse series on anterior area and the lateral angles black; scutellum with a small black impression in each basal angle; lateral pronotal angles gradually acuminate; second joint of antennæ shorter than the third; pronotum rather densely punctate, punctures on posterior area more obscure, anterior lateral margins slightly sinuate in the middle, obtusely crenulate before the sinus, lateral angles much outwardly produced, acute, above obtusely carinate; scutellum and corium densely punctate, scutellum furnished on posterior area with an obsolete wrinkle or ridge; upper surface of abdomen violaceous-black, connexivum spotted with black, spot on sixth segment and the anal appendage black.

I have not seen this species, but the above seem to be the salient characters given by Stål.

Length 15; breadth between pronotal angles 10 millim.

Hab. "India orientalis" (*Stockholm Mus.*).

Genus **PICROMERUS**.

Picromerus, *Amy. & Serv. Hém.* p. 84 (1843): *Dall. List Hem.* i, p. 76 (1851).

Cimex, subg. Cimex, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 497.

Type, *P. bidens*, Linn., a Palæarctic species.

Distribution. Palæarctic and Oriental Regions.

This genus is to be distinguished from the two preceding ones

by the abdomen being practically unarmed at base, or having the second segment produced in a short obtuse tubercle; the lateral lobes of the head are scarcely longer than the central and do not meet beyond it; the pronotum is also distinctly elongate and narrowed anteriorly, much longer than its width at anterior margin; the anterior tibiæ are not dilated; anterior femora prominently spined before apex; anterior tibiæ distinctly spined on inner margin.

399. **Picromerus obtusus**, *Walk. Cat. Het.* i, p. 133 (1867).
Picromerus nigrivitta, *Walk. loc. cit.*

Fuscous-brown, thickly and minutely punctate, beneath with legs a little paler; antennæ ochraceous, apex of third joint and the fourth and fifth joints black, bases of fourth and fifth ochraceous; pronotum with the lateral margins crenulate, pronotal angles black, produced very slightly backwardly at apices which

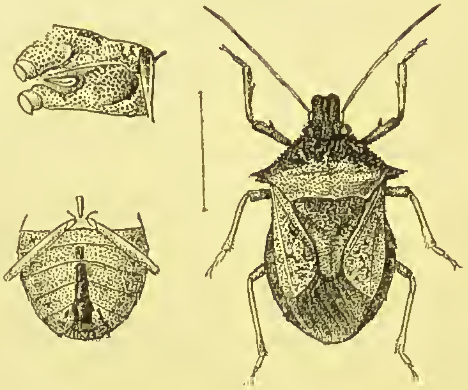

Fig. 159.—*Picromerus obtusus.*

are emarginate, the anterior spine much the longest; corium more opaque and less punctate, the costal area moderately rugulose: abdomen beneath with a more or less well-defined central black fascia; femora darkly speckled; tibiæ paler, their apices and the tarsi black.

Length 11 to 13; breadth between pronotal angles $7\frac{1}{2}$ millim.

Hab. Sikhim (*Atkinson Coll.*). Nága Hills (*Doherty*). Burma; Karennee (*Fea*).

Genus **AUDINETIA**.

Audinetia, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 136 (1862); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 496.

Type, *A. spinidens*, Fabr.

Distribution. Neotropical, Ethiopian, Oriental, and Australasian Regions.

Body elongate; head somewhat long, lateral lobes very slightly

longer than the central; pronotum deflected anteriorly, convex at basal area, anterior lateral margins not denticulate, obsoletely crenulate, lateral angles produced in straight subacute spines, notched behind before apex; scutellum moderately long and slender; corium with the lateral margin obliquely straight; femora unarmed; ventral spine short and blunt.

400. **Audinetia spinidens**, *Fabr.* (Cimex) *Mant. Ins.* ii, p. 285 (1787): *Dall.* (Picromerus) *List Hem.* i, p. 95 (1851); *Voll.* (Arma) *Faun. Ind. Néerl.* iii, p. 10 (1868); *Stål, Hem. Fabr.* i, p. 16 (1868); *Dist. Biol. Centr.-Am., Rhynch.* i, p. 35 (1879).
Asopus geometricus, *Burm. Handb.* ii, p. 380 (1835); *Dall.* (Arma) *Tr. E. S.* v, p. 187, pl. 19, f. 2 (1849).
Pentatoma aliena, *Westw. in Hope Cat. Hem.* i, p. 40 (1837).
Audinetia aculeata, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 137, pl. 1, f. 1 (1862).

Pale brownish-ochraceous; apex of the third joint of antennæ and the fourth and fifth joints black, head with a blackish punctate fascia on each side of central lobe; pronotum with a pale central broken levigate line extending between the pronotal angles, which are black and emarginate, the posterior spine being very small; scutellum with the apex and a central apical line luteous; corium with the lateral margins broadly luteous; membrane pale fuliginous; body beneath pale ochraceous, thickly and coarsely punctate: abdomen with a central broken black fascia, sometimes obsolete, and the stigmata black; tarsi piceous.

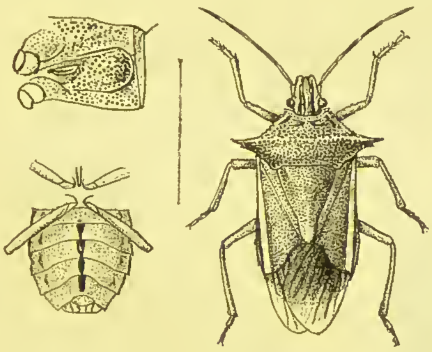
Fig. 160.—*Audinetia spinidens.*

Length 13 to 16; breadth between pronotal angles 7 to $8\frac{1}{2}$ millim.

Hab. Sikhim. Assam; Harmatti (*Atkinson Coll.*), Khási Hills (*Chennell*). Bengal; Ranchi (*Irvine*). Bangalore (*Cameron*).—A very widely distributed species, recorded from several islands of the Malay Archipelago; specimens from Fiji and Tahiti are in my own collection; not uncommon in East Africa and Abyssinia, and recorded from Mexico.

Genus PODISUS.

Podisus, *Herr.-Schäff. Wanz. Ins.* ix, p. 296 (1853); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 497; *Dist. Biol. Centr.-Amer., Rhynch.* i, p. 36 (1879).
Apateticus, *Dall. List Hem.* i, pp. 77 & 105 (1851).

Tolepta, *Stål, Bidr. till Rio Jan.-trakt. Hem.* i, p. 10 (1858).
Subg. Troilus, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 498.
Subg. Apœcilus & Tylospilus, *Stål, En. Hem.* i, pp. 49 & 52 (1870).

Type, *P. lineolatus*, Herr.-Schäff., a Central American species.

Distribution. Nearctic and Neotropical Regions; one Palæarctic species found in India.

A very variable genus, already separated into many subgenera (*supra*). As only one species is found in this fauna, the characters of that species alone require to be described here. It is at once separable from *Audinetia* by the shorter head and body, the rounded pronotal angles (in many Neotropical species, however, these are spinous), the dentate anterior lateral pronotal margins, the rounded apices of the lateral lobes to head, &c.

401. **Podisus luridus**, *Fabr.* (Cimex) *Syst. Ent.* p. 701 (1775); *Hahn*, (Arma) *Wanz. Ins.* i, p. 97, t. 15, f. 53 (1831); *Herr.-Schäff.* (Pentatoma) *Nom. Ent.* i, p. 56. 92 (1835); *Burm.* (Asopus) *Handb. Ent.* ii, p. 379 (1835); *Atkins. J. A. S. B.* 1888, p. 180 & synonymy.
Cimex elector, *Fabr. Ent. Syst.* iv, p. 98 (1794).
Pentatoma sublurida, *Westw. in Hope Cat.* i, p. 41 (1837).
Var. angusta, *Reut. Berl. ent. Zeitschr.* xxv, p. 156 (1881).

Ochraceous, thickly covered with bronzy punctures; head, pronotal margins, and connexivum bronzy-green, the latter with reddish-ochraceous transverse spots; pronotum with the lateral dentate margins luteous, the lateral angles broadly and somewhat laminately produced; scutellum with a dark foveate impression in each basal angle; antennæ black, apices of second and third joints (narrowly), apex of fourth joint (broadly), and base of fifth joint luteous; legs ochraceous, spotted with black.

Fig. 161.—*Podisus luridus.*

Var. Apex of scutellum narrowly luteous.

Length $10\frac{1}{2}$ to 13; breadth between pronotal angles 7 to 8 millim.

Hab. N. India. Burma (*Coll. Dist.*).—A widely distributed Palæarctic species.

Genus ASOPUS.

Asopus, *Burm. Nov. Act. Acad. Leop.* xvi, *Suppl.* p. 292 (1834); *Stål, Hem. Afr.* i, p. 63 (1864).
Amyotea, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 137 (1862).

Type, *A. malabaricus*, Fabr.

Distribution. India, throughout the Malayan Archipelago, and Japan.

Posterior pronotal angles obtuse, not spinously produced; abdominal spine obtuse, short; femora and tibiæ unarmed; last joint of rostrum very short; second joint of antennæ more than twice as long as third.

402. **Asopus malabaricus**, *Fabr.* (Cimex) *Syst. Ent.* p. 718 (1775); *id.* (Lygæus) *Ent. Syst.* iv, p. 151 (1794); *Stål, En. Hem.* i, pp. 56 & 230 (1870).

Cimex mactans, *Fabr. Spec. Ins.* ii, p. 366 (1781); *Dall.* (Asopus) *List Hem.* i, p. 107 (1851); *Voll.* (Asopus) *Faun. Ind. Néerl.* iii, p. 12 (1868).

Cimex oculatus, *Fabr. Ent. Syst. Suppl.* p. 535 (1798).

Lygæus argus, *Fabr. Syst. Rhyng.* p. 217 (1803); *Burm.* (Asopus) *Nova Acta Acad. Leop.* xvi, *Suppl.* p. 293, t. 41, f. 6 (1834).

Amyotea dystercoides & nigripes, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 137, ff. 2, 3, & p. 138, ff. 4, 5 (1862).

Pale reddish; antennæ, eyes, basal spot to head, two (sometimes three) spots to pronotum, a large spot near each basal angle of scutellum, and membrane black: body beneath luteous; head beneath, lateral margins of sternum and abdomen, rostrum, coxæ, and femora pale reddish; tibiæ, tarsi, and anterior margins of sternal and abdominal segments black or bluish-black: body above thickly and very finely punctate.

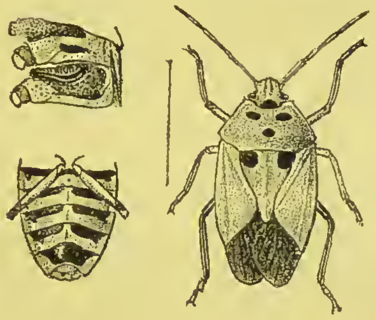

Fig. 162.—*Asopus malabaricus.*

Length 12 to 14 millim.

Hab. Bengal; Calcutta; Bombay (*Leith*); Bangalore (*Cameron*). Assam. Burma; Bhamo, Palon (*Fea*).—Also recorded from Java, Borneo, Sumatra, and Philippines.

Genus ZICRONA.

Zicrona, *Amy. & Serv. Hém.* p. 86 (1843); *Dall. List Hem.* i, p. 77 (1851); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 499.

Type, *Z. cærulea*, Linn.

Distribution. Palæarctic and Oriental Regions.

Body shining; second joint of antennæ longer than the third; rostrum with the second joint longest, but shorter than the two apical joints taken together; lateral lobes of the head not or very slightly longer than the central lobe: pronotum with the lateral margins entire or very obsoletely eroded: frena not extended beyond the middle of the scutellum; abdomen unarmed at base; anterior tibiæ not dilated.

403. **Zicrona cærulea**, *Linn.* (Cimex) *Syst. Nat.* ed. x, i, p. 445 (1758); *Hahn* (Pentatoma), *Wanz. Ins.* ii, p. 65, f. 154 (1834); *Burm.* (Asopus) *Handb. Ent.* ii, p. 378 (1835); *Blanch.* (Stiretrus) *Hist.*

Nat. Ins. p. 154 (1840); *Amy. & Serv. Hém.* p. 86 (1843); *Atkinson, J. A. S. B.* 1888, p. 169 & syn.
Pentatoma concinna & violacea, *Westw. in Hope Cat.* i. p. 39 (1837).
Zicrona illustris, *Amy. & Serv. Hém.* p. 87 (1843).

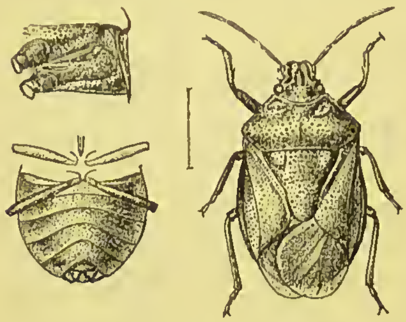

Fig. 163.—*Zicrona cærulea.*

Entirely cæruleau or blue or violaceous; antennæ and membrane black; above very finely and somewhat sparingly punctate; scutellum a little gibbous at base.

Length 9 to 10 millim.

Hab. Kashmir; Sind Valley (*Stoliczka*). Bengal. Nága Hills (*Doherty*). Burma; Karennee (*Fea*).—Also received from several islands in the Malay Archipelago, not uncommon in China and Japan, and a widely distributed species throughout the Palæarctic Region.

Species of uncertain position.

Arma velata, Walk. Cat. Het. iii, p. 532 (1868).

This species, described from Hindostan, is in the National Museum at Melbourne. It is certainly described in the wrong genus, probably does not belong to the Asopinæ, and is very possibly a synonym of some other species.

Subfamily VII. TESSARATOMINÆ.

Tessaratomida, *Stål, Hem. Afr.* i, p. 33 (1864).
Edessidæ, part., *Dall. List Hem.* i, p. 316 (1851).

The Tessaratominæ comprise the largest representatives of the whole Heteroptera, and reach their highest development in the Oriental Region. This subfamily of the Pentatomidæ is easily distinguished by having the spiracles of the basal ventral segment exposed, not hidden by the metasternum.

In life, the colour of many species, in genera such as *Eusthenes*, is bright olivaceous-green, becoming much duller and darker after death*; it must therefore be kept in mind that the colour descriptions here given are taken from cabinet specimens.

* The greenish coloration can be reproduced by immersing the dried specimen in spirit or even water.

Division *TESSARATOMARIA.*

Tessaratomina, *Stål, En. Hem.* i, p. 60 (1870).
Tessaratomaria, *Horv. Termész. Füzetek*, xxiii, p. 339 (1900).

Metasternum much elevated and freely produced forward; scutellum distinctly produced behind the frena, the produced part triangular or spatulate; pronotum posteriorly produced at base of scutellum.

Synopsis of Genera.

A. Posterior margin of pronotum strongly produced over base of scutellum .... TESSAROTOMA, p. 257.
B. Posterior margin of pronotum slightly produced over base of scutellum.
  a. Head small, about as long as broad.
    a. Posterior margin of pronotum straight. . HYPENCHA, p. 260.
    b. Posterior margin of pronotum convex . . PYGOPLATYS, p. 261.
  b. Head long, about twice as long as broad. . AMISSUS, p. 262.

Genus **TESSARATOMA.**

Tessaratoma *Lepell. & Serv. Encycl. Méth.* x, p. 590 (1825); *Stål, Hem. Afr.* i, pp. 224 & 229 (1864).
Tesseratoma, *Latr. Règne An.* v, p. 195 (1829).

Type, *T. papillosa*, Drury.
Distribution. Oriental and Ethiopian Regions.

Head small, rounded at the apex, the lateral lobes longer than the central lobe and meeting beyond it; ocelli placed near the eyes; antennæ four-jointed, somewhat short and stout; rostrum short, extending to about the middle of the mesosternum; pronotum produced posteriorly over the base of the scutellum; apex of scutellum scarcely covering the anterior basal angle of the membrane; corium with the apical margin rounded towards the exterior apical angle; membrane with the veins forming several areolets or cells at base; prosternum more or less anteriorly dilated, sinuate behind the eyes; mesosternum with a robust ridge; metasternum considerably elevated, the elevation sinuated posteriorly, the anterior portion narrowed and extending to the anterior coxæ; second abdominal segment elevated in the middle into an obtuse tubercle which touches the base of the metasternal elevation; femora usually spinous beneath; tibiæ furrowed above; tarsi three-jointed.

404. **Tessaratoma nigripes**, *Dall. List Hem.* i, p. 341 (1851).
Tessaratoma javanica, *var.* nigripes, *Voll. Faun. Ind. Néerl.* iii, p. 26 (1868).

Ochraceous or brownish-ochraceous; head with the margins narrowly black; lateral margins of the pronotum rounded, broadly reflexed; apex of scutellum hollowed and black; membrane bronzy ochraceous: body beneath with the abdomen pale castaneous,

somewhat opaque, the sternum brownish-ochraceous, suffused with darker markings, of which the most distinct on the abdomen are the central ridge, lateral margins, and a short transverse stria near the stigmatal spots; legs, rostrum, and antennæ black or very dark castaneous.

Length 26 to 35; greatest breadth 15 to 19 millim.

Hab. Sikhim (*Atkinson Coll.*). Malabar (*Coll. Dist.*).—Common in the Malay Peninsula, and found in Java, Sumatra, Borneo, and some other islands in the Malay Archipelago.

The dilated anterior margins of the pronotum are much more convex than in *T. quadrata.*

405. **Tessaratoma quadrata**, sp. n.

Pale ochraceous; antennæ, extreme margins of head and pronotum, rostrum, and the apex of the scutellum black: body

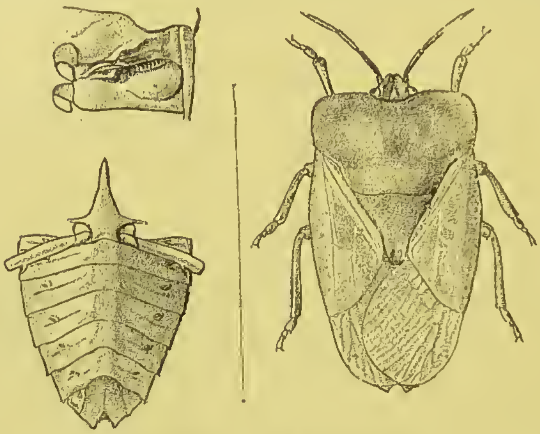

Fig. 164.—*Tessaratoma quadrata.*

beneath and legs pale castaneous; abdomen above dark bluish-black, its lateral margins castaneous.

The principal characteristic of this species is in the subquadrate anterior angles of the pronotum, by which it differs from *T. malaya*, Stål, and also by the colour of the legs. It also differs from Stål's species, to which it is most closely allied, by having the pronotal margins black, by its less ovate body, its corium smoother and less wrinkled, the blackish colour of the abdomen above, and the pale castaneous legs, &c.

Length 33 to 37; greatest breadth 21 to 22 millim.

Hab. Nepal (*Coll. Dist.*); Sikhim. Assam; Khási Hills (*Chennell*), Margherita (*Doherty*).

In enumerating Mr. Chennell's collection in 1879, I concluded that this species was the *T. malaya*, Stål, in which course I seem to have been followed by Atkinson (J. A. S. B. lviii, 1889, p. 54). Mr. Doherty has, however, since collected for me in the Malay

Peninsula an ample series of Stål's species, which does not appear to enter our fauna.

406. **Tessaratoma javanica,** *Thunb.* (Cimex) *Nov. Ins. Spec.* ii, p. 45 (1783); *Amy. & Serv. Hém.* p. 165 (1843); *Voll. Faun. Ind. Néerl.* iii, p. 25, pl. iii, f. 4 *b* (1868); *Stål, En. Hem.* i, p. 67 (1870).
Tessaratoma proxima, *Westw. in Hope Cat.* i, p. 27 (1837).
Tessaratoma papillosa, *Blanch. Hist. Ins. Hém.* p. 142, pl. vi, f. 2 (1840).
Tessaratoma angularis, *Dohrn, Stett. ent. Zeit.* xxiv, p. 349 (1863).
Tesseratoma striata, furcifera, timorensis & clara, *Walk. Cat. Het.* iii, pp. 463 & 464 (1868).
Tessaratoma papillosum, *var.* clara, *Kirby, Journ. Linn. Soc., Zool.* xxiv, p. 87 (1891).
Tessaratoma papillosa, part., *Dist. A. M. N. H.* (7) vi, p. 60 (1900).
Stoll, Pun. f. 2.

Ochraceous or brownish-ochraceous, sometimes pale olivaceous-brown; antennæ black, apical joint generally, but not always, brownish-ochraceous; margins of head and pronotum very narrowly piceous; pronotum with the lateral margins moderately ampliated and reflexed, not anteriorly dilated as in the two preceding species, but almost oblique from the lateral angles to head; apex of scutellum more or less piceous: body beneath generally covered with a white powdery substance; legs and tarsi dark castaneous; body above very finely and obscurely punctate. In the male of this species the anal appendage is truncate at its apex.

Length 25 to 31; breadth 15 to 16½ millim.

Hab. Sikhim; Assam (*Atkinson Coll.*). Bombay (*Dixon*). Malabar and Secunderabad (*Coll. Dist.*). Ceylon (*Green*). Burma; Karennee (*Fea*). Tenasserim; Meetan (*Fea*).—Also found in the Malay Peninsula and several islands of the Malayan Archipelago.

The Soapnut-tree Bug, found on the tree of that name (*Sapindus trifoliatus*, Linn.), produces a shrill sound when caught: common in Bombay from September to May (*R. M. Dixon*).

Considerable confusion has existed, and probably still exists, in the synonymy of this and the following species (*T. papillosa*); from an examination of a very large number of specimens, I conclude that I was wrong in placing the four species described by Walker (*supra*) as synonyms of *T. papillosa*, and that they really represent *T. javanica*. The colour of the antennæ is a variable character, and it is in male specimens that the real differentiation exists.

407. **Tessaratoma papillosa,** *Drury* (Cimex), *Ill.* i, p. 96, t. 43, f. 2 (1770); *Wolff, Ic.* i, p. 12, f. 12 (1800); *Hahn, Wanz. Ins.* ii, p. 123, pl. 67, f. 204 (1834); *Amy. & Serv. Hém.* p. 165 (1843); *Stål, En. Hem.* i, p. 67 (1870).
Cimex chinensis, *Thunb. Nov. Ins. Sp.* ii, p. 45, t. 2, f. 59 (1783).
Tessaratoma sonneratii, *Lepell. & Serv. Enc. Méth.* x, p. 590 (1825).
Larva: Tessaratoma ossa-cruenta, *Gray, Griffith's An. Kingd.* xv, p. 239, pl. 93, f. 1 (1832).

This species is allied in general coloration to the preceding species (*T. javanica*), but is a narrower and more elongate insect; the antennæ are altogether black; and in the male the anal appendage is sinuate at the apex, the apical angles acute.

Length 25 to 28; breadth 13½ to 15 millim.

Hab. Assam. Calcutta (*Atkins. Coll.*). Nilgiri Hills (*Hampson*).—This species is better known from China, where it is the dominant form of the genus.

Genus **HYPENCHA**.

Hypencha, *Amy. & Serv. Hém.* p. 166 (1843); *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *H. apicalis*, Lepell. & Serv., a Malayan species.

Distribution. Oriental Region.

Head moderately pointed; antennæ a little longer than in *Tessaratoma*, with the joints proportionally longer and less stout; rostrum passing the anterior coxæ; pronotum transverse, the lateral angles prominent, rounded, the basal margin slightly produced posteriorly over the base of the scutellum; metasternal elevation continued a little beyond the anterior coxæ and slightly directed downward towards apex; scutellum not reaching the middle of abdomen, its apex more or less spatulate; abdomen not dilated or only slightly dilated on each side; intermediate and posterior femora prominently spined before apex.

408. **Hypencha luctuosa**, *Stål, Tr. E. S.* (3) i, p. 596 (1863).

"♂. Obovate, somewhat brassy black; above sparingly but

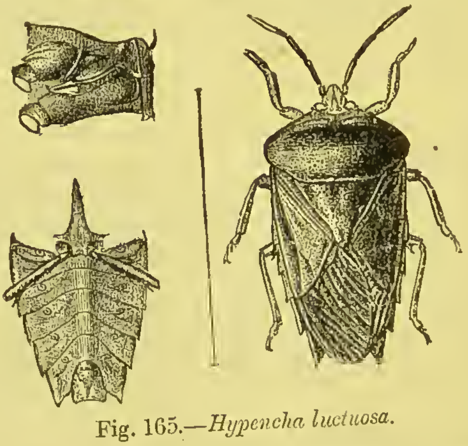

Fig. 165.—*Hypencha luctuosa.*

distinctly punctate, more finely on hemelytra; beneath densely, finely, rugulosely punctate; apical joint of antennæ (excluding base), head beneath, meso- and metasterna ochraceous; lateral angles of pronotum somewhat prominent." (*Stål.*)

Length 28; breadth 15 millim.

Hab. Burma (*Brit. Mus.*).

Stål's type is here figured.

Genus PYGOPLATYS.

Pygoplatys, *Dall. List Hem.* i, p. 338 (1851); *Stål, Hem. Afr.* p. 225 (1864).
Subg. Odontoteuchus, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 643.

Type, *P. validus*, Dall., from an unknown locality.
Distribution. Burma, Malayana.

Head not broader than long, somewhat pointed anteriorly; basal joint of antennæ not quite reaching the apex of head, rostrum passing the anterior coxæ; pronotum with the lateral angles produced in broad flat processes or strong pointed spines; the posterior margin produced in a semicircle over the base of the scutellum; metasternal process narrowed anteriorly and produced to the anterior coxæ, emarginate posteriorly for the reception of the basal abdominal spine or tubercle; anal appendages exhibiting eight teeth or spines.

409. **Pygoplatys acutus**, *Dall. List Hem.* i, p. 340 (1851).
Pygoplatys roseus, *Voll. Faun. Ind. Néerl.* iii, p. 24 (note) (1868).

Pale ochraceous, somewhat densely punctate; pronotum, at each lateral angle, with a long stout acute spine, which is somewhat coarsely blackly punctate; connexivum margined and spotted with brassy-green; antennæ brownish-ochraceous; head usually rosaceous; anterior lateral margins of pronotum transversely ridged; scutellum with the apical area furrowed and less densely punctate; abdomen beneath with a distinct central ridge.

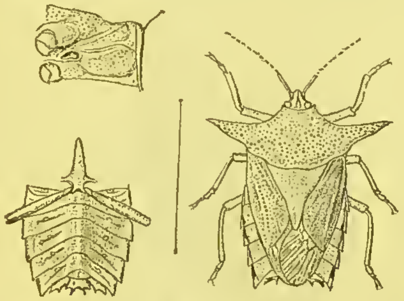

Fig. 166.—*Pygoplatys acutus.*

Length 17 to 18; breadth between pronotal angles $16\frac{3}{4}$ millim.

Hab. Burma (*Atkinson Coll.*). Malacca (*Coll. Dist.*).

410. **Pygoplatys tauriformis**, *Dist. A. M. N. H.* (6) xi, p. 431 (1893).

Pale olivaceous or ochraceous, obscurely punctate; pronotal angles strongly produced in long anteriorly curved spines, marked with very coarse black punctures, and with their apices subacute and slightly recurved; antennæ castaneous, the apical joint, excluding apex, fuscous; eyes, apices of the tibiæ, the tarsi, and lateral and apical margins of the abdomen (narrowly) black, the last also spotted with ochraceous.

Length 21; breadth between pronotal angles 20 millim.

Hab. Tenasserim; Myitta (*Doherty*).

Differing principally from *P. acutus* by the longer and more anteriorly produced pronotal angles.

Genus AMISSUS.

Amissus, *Stål, Tr. E. S.* (3) i, p. 595 (1863).

Type, *A. atlas*, Stål.

Distribution. Tenasserim, Malayana.

Body large, oval; head subelongate, lateral lobes very long, continuous before the central lobe, ocelli remote from the eyes, antennæ four-jointed; pronotum with the posterior margin convexly produced over the base of the scutellum; corium with the apical margin straight, the apical angle rounded; membrane with the veins forming many areolets or cells at base; mesosternum somewhat broadly elevated and widely emarginate anteriorly; metasternum broadly elevated and posteriorly broadly sinuate to receive the basal abdominal tubercle; legs somewhat short, femora armed with two spines at apices.

411. **Amissus atlas**, *Stål, Tr. E. S.* (3) i, p. 596 (1863); *Atk. J. A. S. B.* lviii, p. 63 (1889).

"Dark castaneous; narrow margin and posterior area of pronotum, apex of scutellum, hemelytra, coxæ, trochanters, and

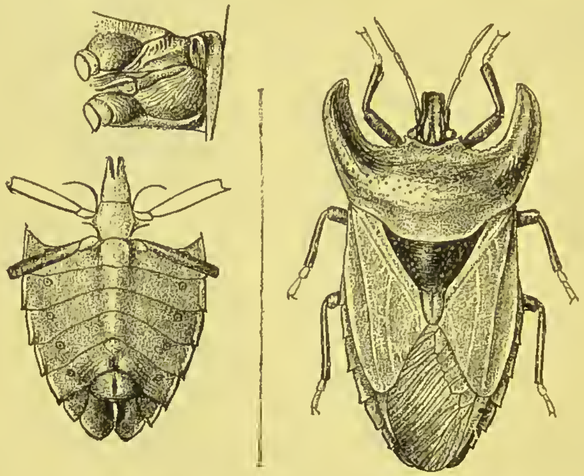

Fig. 167.—*Amissus atlas.*

abdominal margin dilutely castaneous; antennæ, veins of hemelytra, and the tarsi yellowish-castaneous; apical angles of the abdominal segments black." (*Stål.*)

Length 41; breadth 19 millim.

Hab. Tenasserim (*Atkinson Coll.*).—Singapore (*Brit. Mus.*).

Stål's type is here figured.

Division *EUSTHENARIA*.

Eusthenina, *Stål, En. Hem.* i, p. 60 (1870).
Eusthenaria, *Horv. Termész. Füzetek*, xxiii, p. 340 (1900).

Metasternum simple or elevated, never freely produced anteriorly; scutellum equilateral, narrowing and slightly produced at the apex behind the frena, rounded or truncated at apex, less than half the length of abdomen; pronotum not posteriorly produced.

Synopsis of Genera.

A. Posterior femora in male sex strongly incrassated and near base longly spined.
  a. Metasternum strongly elevated .... EUSTHENES, p. 263.
  b. Metasternum not elevated................ EUROSTUS, p. 268.
B. Posterior femora in male sex neither incrassated nor longly spined near base.
  a. Metasternum elevated.
    a. Second abdominal segment centrally elevated and reaching base of metasternum.
      a[1]. Length of head about equal to breadth between eyes.
        a[2]. Mesosternum with a furrowed ridge; metasternal plate narrowed anteriorly, emarginate from centre to base .... MATTIPHUS, p. 269.
        b[2]. Mesosternum with a distinct central plate, furrowed anteriorly; metasternal plate with margins straight from base to centre, then broadly rounded to apex .... ORIGANAUS, p. 271.
    b. First abdominal segment elevated and reaching base of metasternum.
      b[1]. Head shorter than breadth between eyes .... ASIARCHA, p. 272.
  b. Metasternum not elevated.
    a. Posterior femora moderately thickened, posterior tibiæ curved................. CARPONA, p. 273.
    b. Posterior femora not thickened, posterior tibiæ straight.
      a[1]. Abdominal margins straight, not dilated .... PYCANUM, p. 274.
      b[1]. Abdominal margins ampliated, forming an angle on each side .... DALCANTHA, p. 275.

Genus **EUSTHENES**.

Eusthenes, *Laporte, Ess. Hém.* p. 64 (1832); *Amy. & Serv. Hém.* p. 167 (1843); *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *E. robustus*, Lepell. & Serv.

Distribution. Oriental Region and China.

Head moderately long, the apex somewhat truncate, lateral lobes much longer than central lobe, which is altogether submerged,

basal joint of antennæ just passing apex of head; pronotum transverse, lateral angles moderately prominent and rounded, posterior margin straight, not produced over base of scutellum; metasternal plate elevated, but scarcely produced beyond the intermediate coxæ; legs robust, posterior femora much incrassated, with a strong and long spine near base; scutellum not reaching the middle of the abdomen.

412. **Eusthenes robustus**, *Lepell. & Serv.* (Tessaratoma) *Enc. Méth.* x, p. 591 (1825); *Atkins. J. A. S. B.* lviii, p. 64 (1889) & syn.
Eusthenes elephas, *Dohrn, Stett. ent. Zeit.* xxiv, p. 351 (1863).

Body broad, blackish-brown, the corium paler and more castaneous in hue; antennæ black; legs black, tarsi castaneous; above very thickly, finely, and obscurely punctate; lateral margins

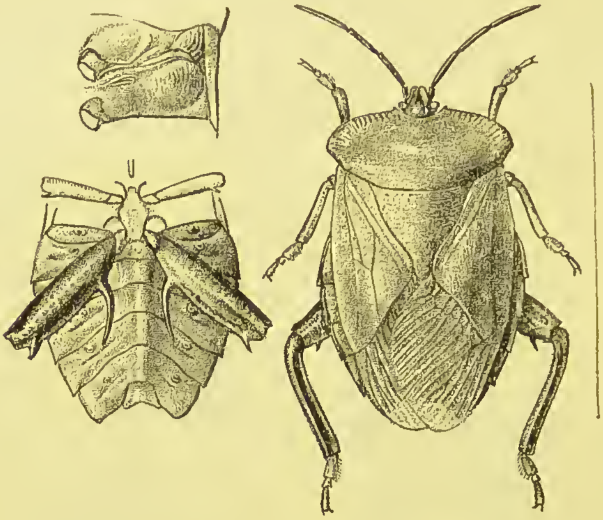

Fig. 168.—*Eusthenes robustus.*

of pronotum transversely wrinkled; second joint of antennæ longer than third, shorter than fourth; membrane dark brassy-ochraceous.

Length 32 to 40; breadth between pronotal angles 17 to 22 millim.*

Hab. Assam; Sibsagar (*Atkinson*), Nága Hills (*Doherty*).—Also received from Java and Borneo.

413. **Eusthenes hercules**, *Stål, En. Hem.* i, p. 231 (1870).

Above piceous, the corium as a rule much paler and more

* Atkinson (J. A. S. B. lviii, p. 65) gives the dimensions of this species a 36–46 millim. I have seen no such gigantic specimens as the last dimension denotes. My largest examples are from Java and Borneo.

castaneous: body beneath pale castaneous; connexivum black, with a reddish-ochraceous spot at base of each segment; apex of scutellum castaneous; legs black, the tarsi yellowish-castaneous.

Allied to the preceding species (*E. robustus*), from which it differs in having the pronotum not wider than the corium, the mesosternal ridge furrowed, a spotted connexivum, the body beneath differently coloured, &c.

Length 39 to 42; breadth between pronotal angles 20 to 22 millim.

Hab. Khási Hills (*Chennell*); Nága Hills (*Doherty*).

414. **Eusthenes eurytus**, *Dist. Tr. E. S.* 1887, p. 358.

Allied to *E. hercules*, Stål, but smaller, the pronotum much less rounded at the anterior lateral margins, and the lateral angles even less produeed than in that speeies; antennæ entirely black, exeept the apical joint, whieh is very narrowly ochraeeous at the apex; tarsi bright ochraeeous; posterior femora beneath with a strong spine near base, and with a double series of short spines near apex.

Length 32 to 36; breadth between pronotal angles 14 to 16 millim.

Hab. Assam (*Coll. Dist.*); Shillong (*Gills*).

The dark legs and pale oehraceous tarsi afford one means for the identifieation of this speeies.

415. **Eusthenes sævus**, *Stål, Tr. E. S.* (3) i, p. 597 (1863).

Olivaeeous blaek with ferruginous refleetions, the eorium most strongly suffused; body beneath, base of the apical joint of the antennæ, and the apex of the seutellum very pale eastaneous.

Allied to *E. eurytus*, from whieh it differs by having the tarsi dark castaneous, not oehraeeous, base of apical joint of antennæ oehraeeous, posterior femora either wanting the double series of spines near apex or possessing them very obsoletely.

Length 27 to 32; breadth between pronotal angles 13 to 16 millim.

Hab. Sikhim (*Atkinson*); Khási Hills (*Chennell*); Nága Hills (*Doherty*). Deccan (*Stockholm Mus.*).—Also received from North China, from which the type was deseribed.

416. **Eusthenes polyphemus**, *Stål, Tr. E. S.* (3) i, p. 598 (1863); *id. En. Hem.* i, p. 232 (1870).

Above shining purplish-blaek, the corinm a little paler: body beneath and legs very pale eastaneous, the posterior femora purplish-blaek; apex of scutellum and a large portion of the basal joint of antennæ very pale eastaneons.

This speeies, besides its smaller size and differently eoloured legs, differs from *E. hercules* in having the mesosternal ridge more elevated and in that part not furrowed; the posterior tibiæ not so stout, with the lower flattened portion longer and reaching the

middle of the tibiæ; the structure of the anal segment is also different.

Length 33 to 35; breadth between pronotal angles 18 millim.

Hab. Deccan (*Stockholm Mus.*). Khási Hills (*Coll. Dist.*); Nága Hills (*Doherty*). Burma; Karennee (*Fea*).

417. **Eusthenes thoracicus,** *Dist. A. M. N. H.* (7) vi, p. 61 (1900).

Head, pronotum, scutellum, and legs piceous; corium and body beneath very dark castaneous; apex of scutellum and eyes reddish-ochraceous; antennæ black, second joint a little longer than the third (remainder mutilated in type); pronotum with the lateral margins distinctly reflexed, rounded anteriorly, and a little concavely sinuate before the posterior angles, which are sub-prominent; before the rounded anterior lateral margins is a broad sublateral rugosity which is strongly transversely striated, remainder of disk somewhat faintly striated and moderately punctate: posterior femora in male strongly incrassated, beneath with a long robust curved spine near base, and with a series of small obtuse spines near apex. Other characters as in *E. robustus*, but *E. thoracicus* differs from that and other species of the genus by the structure of the pronotum.

Length 36; breadth between pronotal angles 17; greatest abdominal breadth 20 millim.

Hab. Assam (*Atkinson, Brit. Mus.*).

418. **Eusthenes cupreus,** *Westw.* (Tessaratoma) *in Hope Cat.* i, p. 27 (1837); *Dall. List Hem.* i, p. 342 (1851); *Stål, En. Hem.* i, p. 231 (1870).

Castaneous, cupreous, or olivaceous-brown, scutellum always dark, sometimes darker than remaining surface; antennæ black, extreme tip of apical joint rufescent: body beneath pale castaneous, legs a little darker; body somewhat narrow and elongate.

Length 26 to 28; breadth between pronotal angles 12 to 13; greatest breadth at corium 14 to 16 millim.

Hab. Sikhim; Assam; Khási Hills (*Chennell*). N.W. Himalaya (*Ind. Mus.*).

Stål, writing on the above species, states that in collections two species are confused. One (length 24; breadth 12 millim.) is distinguished by its smaller size, its somewhat more brilliant colour, by having the anterior part of the pronotum and the hemelytra at base olivaceous, the antennæ shorter, the anterior margins of the pronotum not reflexed, and the dorsum of the abdomen with a large shiny brassy-green disk. For this species he proposes the name of *E. theseus*, Stål. I have not seen any species agreeing with this description from our fauna. The dimensions given by Stål for *E. cupreus* (length 29–35; breadth of hem. $14\frac{1}{2}$–$17\frac{1}{2}$ millim.) exceeds the size of the series of specimens now before me.

E. cupreus and the two following species are distinguished by more elongate structure.

419. **Eusthenes rubefactus**, *Dist. Tr. E. S.* 1901, p. 111.

Above dark castaneous tinged with olivaceous; body beneath with legs pale bright castaneous or ochraceous; abdomen above purplish-red; connexivum olivaceous, spotted with ochraceous at segmental bases; antennæ piceous, with the basal joint, excluding apex, reddish-ochraceous; eyes inwardly margined with reddish-ochraceous; head with the lateral lobes obliquely striate, the basal area slightly rugulose; antennæ with the third joint shorter than the second or fourth joints, extreme tip of apical joint ochraceous; pronotum with the lateral margins strongly wrinkled, the lateral angles subprominent and subacute. — *Male*. Posterior femora strongly incrassated, with a long and strong spine at less than half the length from base, a series of small spines on inner margin of apical area, and with a prominent stout spine or tooth at apex.

The spotted connexivum and colour of the body beneath and of the legs will at once differentiate this species.

Length 27 to 33; breadth between pronotal angles 12 to 15 millim.

Hab. Burma; Karennee (*Fea*).

420. **Eusthenes scutellaris**, *Herr.-Schäff.* (Tesseratoma) *Wanz. Ins.* iv, p. 81, p. 410 (1839); *Stål, En. Hem.* i, pp. 71 & 231 (1870); *Dist. A. M. N. H.* (5) iii, p. 45 (1879).
Eusthenes minor, *Voll. Faun. Ind. Néerl.* iii, p. 29 (1868).
Eusthenes antennatus, *Dist. Tr. E. S.* 1887, p. 357.

Head, pronotum, and corium purplish-brown; eyes ochraceous; scutellum very dark olivaceous with the apex castaneous; membrane shining brassy-brown; basal joint castaneous, and apical joint of the antennæ ochraceous, the last with the apex blackish, second and third joints blackish, base of second narrowly castaneous, apical joint somewhat longest, second very slightly longer than third: body beneath brownish-ochraceous, sometimes castaneous; legs castaneous, tarsi slightly paler; pronotum finely transversely striate; scutellum more coarsely striate; corium thickly and finely punctate; posterior femora with a long spine near base, and a double series of short spines on apical half of the under surface, of which the last two are the longest. The elongate form of the body and the colour of the antennæ distinguish this species; connexivum generally purplish-brown, with a more or less distinct ochraceous spot at base of each segment.

Length 25 to 26; width between pronotal angles 12 millim.

Hab. Nepal. Khási Hills; Shillong (*Coll. Dist.*).

I originally referred to this species as *E. scutellaris* (*supra*), but subsequently described it as a new species, owing to the unsatisfactory nature of the figure given by Herrich-Schäffer. I think it better to pursue my first course as most likely being the correct one. In my description of *E. antennatus* two printers' errors occurred: "legs ochraceous" for eyes ochraceous; and "Long. 35 to 36 mm." for 25 to 26 millim.

Genus EUROSTUS.

Eurostus, *Dall. List Hem.* i, p. 342 (1851): *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *E. validus*, Dall., from China.

Distribution. Himalayas; Burma; China.

Head longer than broad, narrowed anteriorly, the apex slightly emarginate; antennæ four-jointed, second joint longer than the third; rostrum about reaching the middle of the mesosternum: pronotum with the lateral angles unarmed, posterior margin not produced; scutellum short, not reaching the middle of the abdomen, apex small, rounded, and somewhat spatulate; abdomen unarmed at the base; sternum without a ridge; legs stout, anterior and intermediate femora with two spines beneath near apex, posterior femora much incrassated, with a long acute spine near base, two shorter spines near apex, and a double series of minute spines placed along the under surface.

421. **Eurostus grossipes,** *Dall. List Hem.* i, p. 343 (1851).

Head, pronotum, scutellum, and connexivum opaque, piceous with an olivaceous tinge; pronotum faintly wrinkled transversely, the extreme lateral margins brown; scutellum transversely wrinkled, the apex ochraceous; corium purplish-brown, opaque; membrane brownish-ochraceous; connexivum with an ochraceous spot at the base of each segment: body beneath dull violaceous,

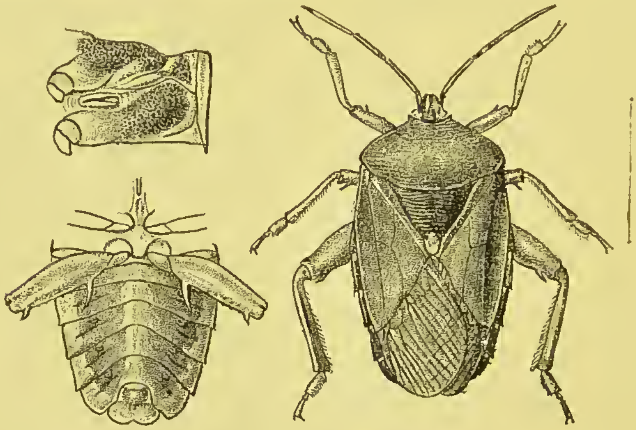

Fig. 169.—*Eurostus grossipes.*

opaque, with the lateral margins and median area brownish-ochraceous; legs and rostrum brownish-ochraceous; antennæ with the basal joint brownish-ochraceous, second black, extreme apex of fourth joint ferruginous.

The above is the description of a typical specimen; some are wholly dark olivaceous-green, or purplish-brown above.

Length 30 to 36; breadth between pronotal angles 15 to 17 millim.

Hab. Sikhim; Darjeeling (*Coll. Dist.*). Assam; Khási Hills (*Chennell*); Margherita (*Doherty*).

422. **Eurostus ochraceus,** *Montand.*? *Ann. Soc. Ent. Belg.* xxxviii, p. 638 (1894); *Dist. Tr. E. S.* 1901, p. 103.

Dull ochraceous; antennæ, margins of head, lateral margins of pronotum, basal lateral margin of corium, and the connexivum black; body beneath, legs, and basal joint of antennæ ochraceous; pronotum faintly and scutellum more profoundly transversely striate.

Length $27\frac{1}{2}$ to 32; greatest breadth 15 to $16\frac{1}{2}$ millim.

Hab. Burma; Karennee (*Fea*). The species was founded on a Chinese specimen.

Genus **MATTIPHUS.**

Mattiphus, *Amy. & Serv. Hém.* p. 168 (1843); *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *M. laticollis,* Westw.

Distribution. Oriental Region.

Pronotum dilated laterally, transversely quadrate, the anterior angles rather prominent; head with the apex emarginate, basal joint of antennæ just passing apex of head; rostrum extending to about the middle of mesosternum, which is distinctly ridged, the ridge anteriorly furrowed; metasternal plate moderately elevated, not posteriorly, but from base to centre emarginate, narrowed anteriorly: legs simple, posterior femora in the male neither incrassated nor very prominently spined near base; second abdominal segment centrally elevated and reaching the base of the metasternum; angles of sixth abdominal segment in the male rounded, in the female acute.

423. **Mattiphus laticollis,** *Westw.* (Eusthenes) *in Hope Cat.* i, p. 27 (1837); *Dall. List Hem.* i, p. 344 (1851).
Mattiphus carrenoi, *Amy. & Serv. Hém.* p. 168 (1843).

Pale, shining, castaneous; scutellum blackish-castaneous, the extreme apex pale luteous; connexivum blackish, obsoletely, sometimes distinctly, spotted with ochraceous at the segmental bases: body beneath and legs luteous; abdomen with a series of transverse striæ near stigmata, which are sometimes darker in colour; antennæ black, basal joint and extreme apices of remaining joints luteous.

Length 27 to 29; breadth between posterior pronotal angles 15 millim.

Hab. India (*Amy. & Serv.*, probably Burma or Tenasserim).—Malay Peninsula and Java.

424. **Mattiphus æruginosus**, *Stål, Tr. E. S.* (3) i, p. 600 (1863).

Oval; brassy-green above, finely punctate; pronotum slightly transversely rugose, its posterior area and inner area of corium more or less ferruginous: body beneath and legs, extreme apex of scutellum, apex of third and base of fourth joints of antennæ, and small marginal abdominal spots ochraceous; sternum and abdomen shining purplish-yellow; femora unarmed. Stature of *Pycanum rubens*, Fabr., but the lateral pronotal margins are straight from the apex to beyond the middle, thence obtusely roundly angulate.

Length 21; breadth 11 millim.

Hab. Ceylon (*Brit. Mus.*).

425. **Mattiphus jaspideus**, *Herr.-Schäff.* (Pycanum) *Wanz. Ins.* ix, p. 308, f. 1009 (1853); *Stål* (Pycanum), *En. Hem.* i, p. 75 (1870); *Dist. A. M. N. H.* (6) xi, p. 432 (1893).

Pale castaneous with resplendent greenish reflections; in fresh specimens the green most developed on the anterior and lateral margins of the pronotum, basal margin of scutellum, and costal area of corium; antennæ black, basal joint somewhat pale castaneous, apex of third and base of fourth joints luteous; apex of scutellum and body beneath shining luteous with greenish reflections; legs pale castaneous, apices of the tibiæ and the tarsi piceous; femora shortly spined beneath near apices; anterior lateral pronotal margins strongly reflexed.

Length 23 to 25; breadth between pronotal angles 12 to 13 millim.

Hab. North-west Himalaya (*Coll. Dist.*). Assam; Margherita (*Doherty*).

Atkinson (J. A. S. B. 1889, p. 78) considers that the shortly spined femora bring this species into the genus *Pycanum*. In my opinion, the raised metasternal plate assuredly locates it in *Mattiphus*.

426. **Mattiphus oblongus**, *Dall. List Hem.* i, p. 344 (1851).
Pycanum pallipes, *Walk. Cat. Het.* iii, p. 473. 14 (1868).

"Above brilliant brassy-green, generally becoming dull pitchy-brown after death; pronotum transverely quadrate, with the anterior angles rather less than right angles, the anterior margin nearly straight, with a small central emargination for the reception of the head, the lateral margins also nearly straight, the posterior margin gently rounded; the surface of the pronotum is faintly wrinkled transversely and minutely punctured; scutellum transversely wrinkled and rather thickly and finely punctured; margins of the abdomen projecting beyond the corium on each side, especially at the apex, the posterior angles of the apical segment very prominent, acute, making the apex of the abdomen apparently truncated and giving an oblong form to the whole body: body

beneath golden yellow; legs pale fulvous brown; antennæ darker, with the apex of the third and base of the fourth joints yellow or orange; remainder of fourth joint black." (*Dallas.*)

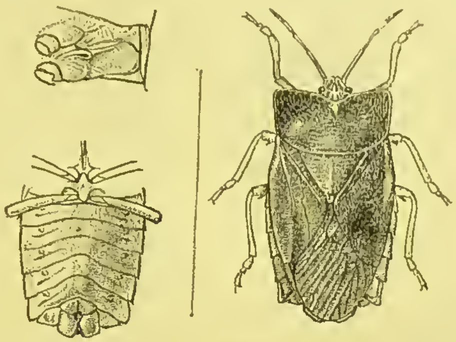

Fig. 170.—*Mattiphus oblongus.*

Length 25 to 27 millim.
Hab. North India (*Brit. Mus.*).
Dallas's type is here figured.

Genus ORIGANAUS.

Origanaus, *Dist. A. M. N. H.* (6) xi, p. 432 (1893).

Type, *O. humerosus*, Dist.
Distribution. Assam Hills.

Body moderately elongate and narrowed towards apex; head about as long as wide at base (including the eyes); rostrum slightly passing the anterior coxæ; antennæ with the basal joint not quite reaching apex of head, second joint considerably longer than third; pronotum laterally and angularly dilated; abdomen with the apices of the apical segment moderately and angulately produced, but not reaching the apex of the anal appendage; prosternum deeply sulcate, mesosternum with a flat central oval elevation, which is somewhat broadly sulcated towards the anterior coxæ; metasternum with a broad central flat elevation, reaching the intermediate coxæ and narrowed and rounded in front; second abdominal segment centrally slightly tuberculous.

427. **Origanaus humerosus**, *Dist. A. M. N. H.* (6) xi, p. 433 (1893)

Very dark purplish-brown; eyes, legs, and body beneath ochraceous or pale castaneous (in fresh specimens the body is evidently pale resplendent green); pronotal angles broadly and subtruncately produced, and from their apices the lateral margins

are moderately concave; membrane pale cupreous; abdomen above purplish-red, with two central metallic greenish fasciæ, the lateral and apical margins dark purplish-brown; pronotum and scutellum finely transversely rugulose; corium very thickly and finely punctate; connexivum nearly black, spotted with ochraceous at the bases of the segments.

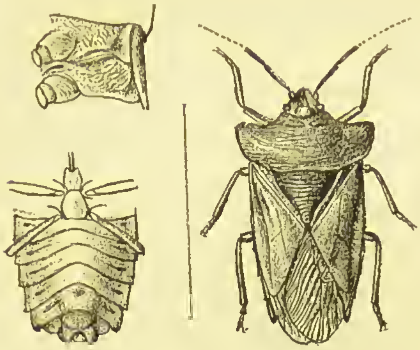

Fig. 171.—*Origanaus humerosus.*

Length 20 to 24; breadth between pronotal angles 12 to 14 millim.

Hab. Nága Hills (*Doherty*).

Although I possess six specimens of this species, the antennæ are more or less mutilated in every one of them.

Genus ASIARCHA.

Asiarcha, *Stål, En. Hem.* i, p. 73 (1870).

Type, *A. nigridorsis*, Stål.

Distribution. India.

Allied to *Mattiphus*, Amy. & Serv., but differing by having the head shorter and more obtuse; the prosternum furrowed, the mesosternum with a longitudinal furrowed ridge; the metasternum elevated, anteriorly and posteriorly narrowed; first

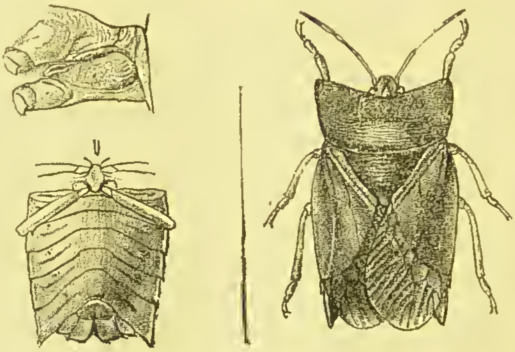

Fig. 172.—*Asiarcha nigridorsis.*

abdominal segment tuberculously elevated at middle; abdomen gradually slightly narrowed posteriorly, angles of sixth segment acutely prominent and directed hindwardly.

428. **Asiarcha nigridorsis**, *Stål* (Mattiphus), *Tr. E. S.* (3) i, p. 600 (1863); *En. Hem.* i, p. 73 (1870).

Above piceous, beneath with antennæ and legs obscurely ochraceous; extreme abdominal margin piceous; fourth joint of

antennæ black, the base luteous; membrane greenish cupreous. Allied to *Mattiphus oblongus*, Dall., but differing by its larger size and by the generic characters above detailed. Abdomen above dark indigo-blue, the lateral margins piceous.

Length 29; breadth 15 to 17 millim.

Hab. Punjab. Nága Hills (*Doherty*). Khási Hills (*Ind. Mus.*).

Genus CARPONA.

Carpona, *Dohrn, Stett. ent. Zeit.* xxiv, p. 351 (1863); *Stål, En. Hem.* i, p. 74 (1870).
Virbius, *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *C. funesta*, Dohrn, from Cambodia.

Distribution. Oriental Region.

Somewhat allied in structure to *Asiarcha*, Stål, but metasternum not elevated; mesosternum centrally sulcate; length of head almost equal to breadth, excluding eyes; posterior femora moderately thickened, posterior tibiæ curved.

429. **Carpona amplicollis,** *Stål* (Pycanum), *Tr. E. S.* (3) i, p. 600 (1863).

Piceous; pronotum and scutellum moderately rugulose, corium very finely, thickly, and obscurely punctate; antennæ with the second and fourth joints subequal in length; scutellum more distinctly punctured than the pronotum; femora beneath armed

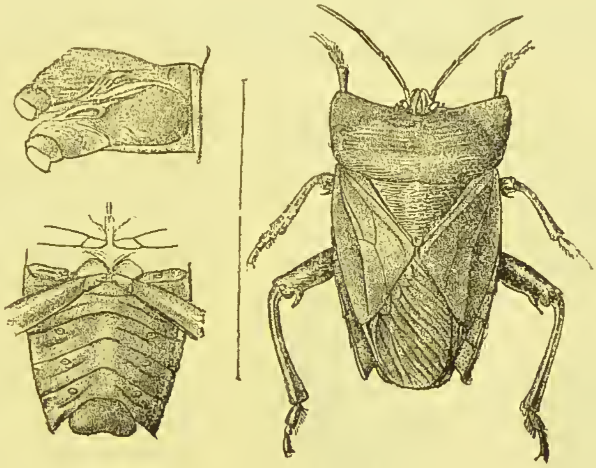

Fig. 173.—*Carpona amplicollis.*

with two spines near apex, the interior spine on the posterior femora robust; posterior tibiæ slightly curved behind the middle.

Length 31 to 36; breadth between anterior pronotal angles 18 to 20 millim.

Hab. North India (*Brit. Mus.*). Assam; Margherita (*Doherty*).

430. **Carpona stabilis**, *Walk.* (Pycanum) *Cat. Het.* iii, p. 472, 12 (1868); *Dist. A. M. N. H.* (6) xi, p. 434 (1893).

Brownish-ochraceous, thickly and finely punctate; pronotum (excluding anterior margin) and scutellum (excluding basal area) transversely rugulose; pronotum subquadrate, with the extreme lateral margins distinctly darker, the anterior angles broadly reflexed; corium very thickly and finely punctate; membrane shining, ochraceous; connexivum margined and spotted with blackish: body beneath more or less shaded with resplendent green, excepting at the anterior sternal angles and at the margins nd central area of the abdomen; legs very dark castaneous.

Length 32; breadth 19 millim.

Hab. "Hindostan" (*Bowring, Brit. Mus.*).

Genus PYCANUM.

Pycanum, *Amy. & Serv. Hém.* p. 171 (1843); *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *P. rubens*, Fabr.

Distribution. Oriental Region.

Head somewhat narrowed to a point, the apex emarginate; antennæ with the basal joint just extending beyond the apex of the head; rostrum extending to about the middle of the mesosternum; pronotum with the lateral margins convex, narrowing anteriorly, moderately reflexed, or with the anterior angles quadrately produced and reflexed; metasternum not elevated; mesosternum centrally sulcate; connexivum extending beyond the corium; femora moderately spined near apex.

431. **Pycanum rubens**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 107 (1794); *Stål, Hem. Fabr.* i, p. 40 (1868).

Cimex amethystinus, *Weber, Obs. Ent.* p. 115 (1801); *Burm.* (Aspongopus) *Handb.* ii, p. 351 (1835).
Edessa amethystina, *Fabr. Syst. Rhyng.* p. 150 (1803).
Tessaratoma alternata, *Lepell. & Serv. Encyc. Méth.* x, p. 591 (1825).

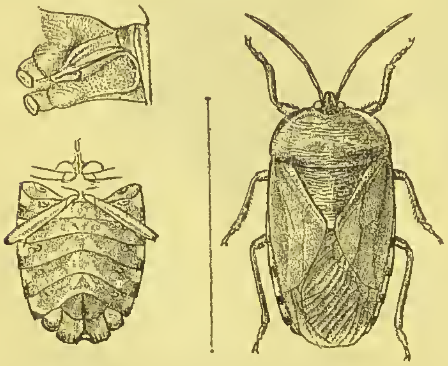

Fig. 174.—*Pycanum rubens.*

Above purplish-brown, suffused with resplendent green on the head; anterior area of pronotum and scutellum sometimes altogether suffused above, or again with the green practically absent; apex of scutellum and large spots to con-

nexivum luteous; body beneath and legs pale purplish-brown, lateral and segmental margins of sternum, transverse central, sublateral, and marginal abdominal spots, coxæ and central area of mesonotum, luteous; abdomen above pale purplish.

Length 24 to 27; breadth 14 to 17 millim.

Hab. Assam (*Atkinson Coll.*). Tenasserim; Mooleyit, Thagata (*Fea*).—A common Malayan species.

432. **Pycanum ochraceum**, *Dist. A. M. N. H.* (6) xi, p. 433 (1893).

Pale uniform ochraceous; antennæ black, with the basal joint and extreme apex of the fourth joint ochraceous; lateral margins of the head black; pronotum with the lateral margins moderately ampliated and rounded, as in *P. rubens*; scutellum with the apical margin stramineous; membrane very pale brassy-brown; connexivum spotted with stramineous at the bases of the segments; body beneath resplendent violaceous or greenish, with a longitudinal central fascia, the lateral margins, sternal segmental margins and curved fasciæ on each side, and the legs ochraceous; femoral apical spines blackish; abdomen above bluish-black, with two broken, narrow, central, longitudinal, ochraceous fasciæ.

Length 24 to 28; breadth 14 to 16 millim.

Hab. Sikhim (*Ind. Mus.*); Darjeeling (*Coll. Dist.*). Assam; Khási Hills (*Chennell*); Nága Hills (*Doherty*); Margherita (*Ind. Mus.*). Burma; Karennee (*Fea*).

433. **Pycanum ponderosum**, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 234; *id. op. cit.* 1856, p. 63, pl. 1 *a*, f. 1.

Dalcantha sancti fargavii, *Voll. Tijdschr. Ent. Ned. Ind.* (2) i, p. 218, pl. xi, f. 6 (1866).

Dull obscure luteous above and beneath; antennæ, extreme lateral margins of head and pronotum, and legs piceous or black; apex of scutellum and the connexivum pale luteous, the last with large blackish spots; membrane very pale brassy-brown. The shape of the pronotum in a general way resembles that of *Mattiphus oblongus*, the anterior angles being quadrately produced and reflexed; but *P. ponderosum* is separated from the genus *Mattiphus* by its metasternum having no elevated central plate.

Length 28 to 35; breadth 20 to 21 millim.

Hab. Sikhim (*Ind. Mus.*). Assam (*Atkinson Coll.*). Southern India (*Coll. Dist.*). Burma (*Coll. Dist.*). Tenasserim; Malewoon (*Fea*).—Also received from the Malay Peninsula.

Genus DALCANTHA.

Dalcantha, *Amy. & Serv. Hém.* p. 170 (1843); *Stål, Hem. Afr.* i, p. 225 (1864).

Type, *D. dilatata*, Amy. & Serv.

Distribution. India.

Head somewhat short and broad, lateral lobes longer than the

central lobe and contiguous in front of it, lateral margins distinctly sinuated; rostrum short, passing the anterior coxæ; pronotum with the posterior margin convex; membrane with the veins at base forming a number of areolas or cells; prosternum centrally furrowed; mesosternum with a furrowed ridge or two parallel ridges; metasternum not elevated; abdomen dilated and posteriorly angulated on each side.

434. **Dalcantha dilatata**, *Amy. & Serv. Hém.* p. 171 (1843); *Dist. A. M. N. H.* (7) vi, p. 61 (1900).
Dalcantha regia, *Walk. Cat. Het.* iii, p. 474. 3 (1868).

Head, pronotum, and scutellum olivaceous, or dark purplish-brown, corium more distinctly purplish; apex of scutellum luteous; membrane pale brassy-brown: body beneath and legs dull ochraceous, the segmental incisures to both sternum and abdomen and some lineate markings distinctly darker; antennæ black, basal joint mostly dark ochraceous, apex of fourth joint luteous.

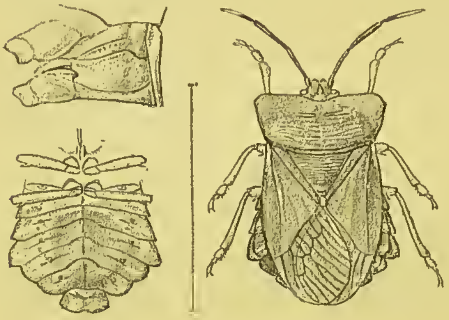

Fig. 175.—*Dalcantha dilatata.*

Length 25 to 27; breadth at abdominal dilatation 17 to 19 millim.

Hab. "North India" and Cachar (*Coll. Dist.*).

435. **Dalcantha inermipes**, *Stål, Tr. E. S.* (3) i, p. 599 (1863).

Purplish-brown above; body beneath, legs, and nearly basal half of costal margin to corium pale ochraceous; the body beneath sparingly mottled with pale fuscous; antennæ and a median central line to abdomen black; basal joint of antennæ ochraceous.

Allied to *D. dilatata*, but with the pronotum a little shorter, lateral anterior angles more dilated and rounded, antennæ more slender; femora unarmed.

Length 20 to 22; breadth between abdominal dilatations 14 to 15 millim.

Hab. Punjab (*Brit. Mus.*). Nága Hills (*Doherty*). *

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* DALCANTHA STÅLII, *Voll. Tijdschr. Ent. Ned. Ind.* (2) i, p. 220, pl. 11, f. 8 (1866); *Stål* (part.) *En. Hem.* i, p. 76 (1870).

I do not know this species; and Stål in admitting its validity has cited the *D. regia*, Walk., as a synonym. This proposed species of Walker I have examined and can only regard as a synonym of *D. dilatata*. I quote Vollenhoven's species here solely on the authority of Stål, and cannot give its differential characters.

I have not proposed a Division for the reception of the two following genera, because they differ considerably between themselves, and it is not desirable, except when absolutely necessary, to create a Division for a single genus. From the *Tessaratomaria* the genera here following differ in having the posterior margin of the pronotum truncate or concave and not produced over the base of the scutellum; from the *Eusthenaria* they may be at once distinguished by the length of the scutellum, which is half, or more than half, the length of the abdomen.

Genus **MUSCANDA**.

Muscanda, *Walk. Cat. Het.* iii, p. 576 (1868).

Type, *M. testacea*, Walk.

Distribution. Himalayas.

Body moderately flat, subovate; head with the lateral lobes meeting in front of the central lobe, but separate at their apices, their margins upwardly recurved; antennæ with the basal joint passing the apex of the head; pronotum slightly concave on the posterior margin, ridged between the angles, before which it is deflected to head, angles longly produced, anterior lateral margins dentate; scutellum extending beyond frena, about half the length of abdomen, subtriangular; corium moderately dilated from a little beyond base and narrowing again to apex; mesosternum only moderately carinate, the carination neither continued anteriorly nor posteriorly; metasternum moderately centrally elevated; abdomen flat, with a slight central ridge; rostrum not passing the anterior coxæ.

436. **Muscanda testacea,** *Walk. Cat. Het.* iii, p. 577 (1868).

Pale ochraceous, thickly punctate; posterior area of the pronotum and basal area of scutellum rugulose; antennæ obscurely

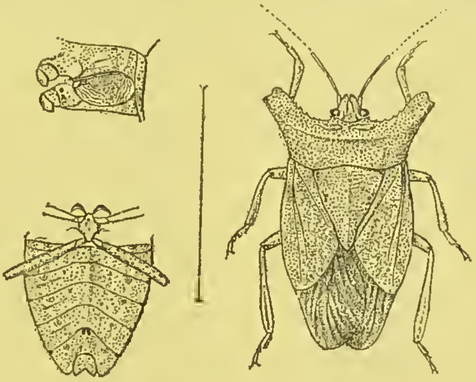

Fig. 176.—*Muscanda testacea.*

pilose, minutely spotted with black, third joint longer than the second (remaining joints mutilated in the type); pronotum with

the anterior lateral angles dentate, a distinct ridge between the central pronotal angles, which are more coarsely punctate; scutellum with an obscure central ridge; corium with the inner area opaque and somewhat sparingly darkly punctate, the costal area more thickly and finely punctate; membrane pale purplish-brown; abdomen beneath and legs concolorous, abdomen with a marginal series of small spots at apices of incisures and two spots at base of sixth segment black.

Length 23; breadth between pronotal angles 16 millim.

Hab. Darjeeling (*Brit. Mus.*).

Genus VITRUVIUS.

Vitruvius, *Dist. Tr. E. S.* 1901, p. 111.

Type, *V. insignis*, Dist.

Distribution. Burma.

Body ovate, moderately gibbous, attenuated posteriorly; head small, deflected, lateral lobes meeting in front of central lobe, lateral margins reflexed, anterior margin subtruncate, posterior margin truncate, well inserted in the pronotum; ocelli rather nearer to eyes than to each other; rostrum reaching the intermediate coxæ, second joint longest; antennæ five-jointed, basal joint stout, not quite reaching apex of head; second and third joints longest and subequal in length, fourth and fifth a little shorter and subequal; pronotum convex, deflected anteriorly, broader than long, the whole lateral area produced into a broad subacute angulation; scutellum convex, more than half the length of the abdomen, its apex narrowed and rounded; corium with its lateral margins convex, its apical margin slightly rounded; membrane with longitudinal veins emitted from basal cellular areas; abdomen with the lateral margins entire, not projecting beyond corium; prosternum longitudinally sulcate; mesosternum obscurely carinate; metasternum obscurely elevated; legs moderately robust; tibiæ sulcated; tarsi three-jointed.

437. **Vitruvius insignis**, *Dist. Tr. E. S.* 1901, p. 112.

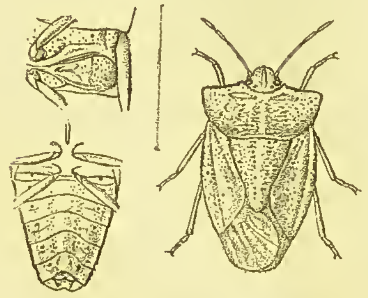

Fig. 177.—*Vitruvius insignis.*

Ochraceous; anterior lateral margins of pronotum, lateral margins of corium near base, some obscure longitudinal punctures to pronotum in about six series, a double discal series at base of scutellum, some scattered punctures on disk of corium and apical area of scutellum, black: body beneath luteous, legs ochraceous; head finely wrinkled and punctate, pronotum more closely so and with two elongate, transverse, impunctate spaces near anterior margin;

scutellum distinctly transversely wrinkled, with a faint but broad central impression; corium somewhat thickly and finely punctate, but longitudinally levigate on disk.

Length 17; breadth between pronotal angles $10\frac{1}{2}$ millim.

Hab. Burma; Rangoon (*Fea*).

Subfamily VIII. DINIDORINÆ.

Dinidorina, *Stål, En. Hem.* i, p. 79 (1870); *id. Öfv. Vet.-Ak. Förh.* no. 3, p. 32 (1872).

Dinidorida, *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 522.

Edessidæ (part.), *Dall. List Hem.* i, p. 316 (1851).

Dinidorinæ, *Dist. Biol. Centr.-Am., Rhynch.* i, p. 102 (1881).

Scutellum never extending beyond middle of abdomen, its apex broad; hemelytra and wings usually complete, rarely abbreviated; membrane very large, primary and subtended veins of wings distant, converging at the apex. The small scutellum and large membrane are the principal characters of this subfamily, which, though a small one, is widely distributed; it is, however, only found in the southern and eastern areas of the Palæarctic Region. The genus *Dinidor*, from which the name is derived, is Neotropical, but an African species has been ascribed to it by Horvath.

Synopsis of Genera.

A. Antennæ five-jointed .... ASPONGOPUS, p. 281.
B. Antennæ four-jointed.
  a. Head small, lateral lobes only a little longer than central lobe .... CYCLOPELTA, p. 279.
  b. Head large, lateral lobes much longer than central lobe and generally meeting beyond it.
    a. Pronotal margins angularly sinuate.
      a'. Abdominal margins lobately dentate.. MEGYMENUM, p. 285.
    b. Pronotal margins obliquely straight.
      b'. Abdominal margins moderately erosed; hemelytra about covering abdomen.. BRYSODEPSUS, p 287.
      c'. Abdominal margins not erosed; hemelytra not covering abdomen........ ATELIDES, p. 288.

Genus CYCLOPELTA.

Cyclopelta, *Amy. & Serv. Hém.* p. 172 (1843).

Dinidor, *Stål, Hem. Afr.* i, p. 211 (1864).

Type, *C. obscura*, Lepell. & Serv.

Distribution. Ethiopian and Oriental Regions.

Body oval or ovate; head with the margins ampliately reflexed, lateral lobes a little longer than the central lobe, apex subtruncate; antennæ four-jointed, basal joint passing the apex of the head; rostrum reaching the intermediate coxæ; pronotum with the lateral angles rounded, not produced; scutellum short, apex broad;

membrane large, veins reticulated; mesosternum sulcated: abdomen unarmed at base.

438. **Cyclopelta obscura**, *Lepell. & Serv.* (Tessaratoma) *Enc. Méth.* x, p. 592 (1825); *Amy. & Serv. Hém.* p. 173 (1843).
Aspongopus alternans, *Westw. in Hope Cat.* i, p. 26 (1837).
Aspongopus depressicornis, *Herr.-Schäff. Wanz.* iv, p. 85, f. 418 (1839); *id.* (Dinidor) *op. cit.* vii, p. 76 (1844).

Black or blackish brown; a small spot at base and apex of scutellum and connexivum reddish ochraceous, the last with black spots: body beneath and legs black; the abdomen much suffused with red, the lateral margins, to within the stigmata, reddish-ochraceous, marginal spots and stigmata black; above closely, finely, and obscurely punctate; pronotum and scutellum obsoletely transversely wrinkled.

Length 14 to 16; breadth 9 to 10 millim.

Hab. Sikhim; Calcutta; Madras (*Coll. Atkinson*). Burma; Karennee (*Fea*).—A species found more abundantly in Malayana, and recorded from China.

439. **Cyclopelta parva**, *Dist. A. M. N. H.* (7) vi, p. 220 (1900).

Closely allied to *C. obscura*, but differing by its much smaller size and by the antennæ, which are shorter and broader than in that species, the joints being broader and more spatulate; the connexivum is generally spotted with ochraceous, and there is usually a small central basal ochraceous spot to the scutellum.

Length 10 to 12 millim.

Hab. Rangoon and Pegu (*Atkinson Coll.*). China; Kiukiang and Shantung.

440. **Cyclopelta siccifolia**, *Westw.* (Aspongopus) *in Hope Cat.* i, p. 26 (1837); *Dall. List Hem.* i, p. 347 (1851).
Cyclopelta tartarea, *Stål, Öfv. Vet.-Ak. Förh.* 1854, p. 234.

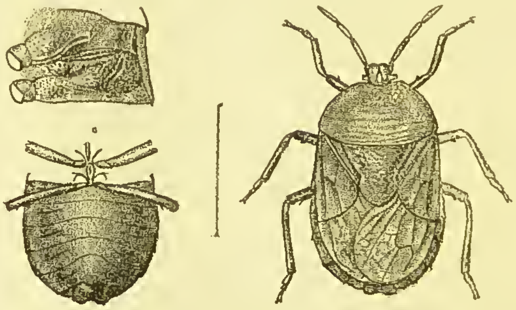

Fig. 178.—*Cyclopelta siccifolia.*

Entirely black or subcupreous black, the membrane more or

less brownish-ochraceous. Differs from *C. obscura* by having the connexivum concolorous, neither red nor spotted with black; the scutellum has sometimes a minute sanguineous spot at base.

Length 11 to 16 millim.

Hab. Sikhim; Mungphu (*Atkinson*). Khási Hills (*Chennell*). Bengal; Moorshedabad (*Ind. Mus.*). Bombay (*Leith*); Bor Ghat (*Dixon*), Poona. Vizagapatam. Ceylon. Burma; Metanja, Teinzo, Bhamo, Rangoon (*Fea*).

A species varying considerably in size. On one specimen in the collection of the Indian Museum is the following label:—"Insects which infest *Erythrina*, several species, and other Leguminosæ—Poona."

441. **Cyclopelta abdominalis**, sp. n.

Above cupreous-brown, corium and membrane a little paler; body beneath pale ochraceous, finely but darkly punctate; abdomen with two fuscous streaks on apical segment, stigmata and marginal spots black; legs dark castaneous; head broad and subquadrate, somewhat coarsely punctate; antennæ with the second joint long, sulcate above, third short (remainder mutilated in type); pronotum and scutellum obscurely punctate and somewhat rugosely transversely wrinkled; corium rugulose; femora spined beneath near apices.

Length 14 millim.

Hab. Mergui; Tavoy (*Coll. Dist.*).

Genus ASPONGOPUS.

Aspongopus, *Laporte* (part.), *Ess. Hém.* p. 58 (1832); *Amy. & Serv. Hém.* p. 173 (1843); *Stål, Hem. Afr.* i, pp. 81, 212 (1864).
Spongopodium, *Spin. Ess. Hém.* p. 305 (1837).
Amacosia, *Spin. Gen. d'Ins. Artr.* p. 118 (1852).
Peltagopus, *Sign. Ann. Soc. Ent. Fr.* 1860, p. 936.
Subg. Colpoproctus, *Stål, En. Hem.* i, p. 81 (1870).

Type, *A. janus*, Fabr.

Distribution. Ethiopian and Oriental Regions, one species entering the Southern Palæarctic Region.

Body oval or ovate; head small, narrower than in *Cyclopelta*, margin laminately reflexed, lateral lobes a little longer than central lobe; antennæ five-jointed; rostrum passing the anterior coxæ; scutellum short, its apex broad; membrane large, veins somewhat anastomosed; abdomen unarmed at base; femora more or less distinctly spined near apices.

442. **Aspongopus janus**, *Fabr.* (Cimex) *Syst. Ent.* p. 714 (1775); *Lap. Ess. Hém.* p. 58 (1832).
Cimex afer, *Dru. Ill.* iii, p. 66, t. 46, f. 7 (1782).
Cimex surinamensis, *Gmel. ed. Syst. Nat.* i (4) p. 2134 (1788).
Aspongopus vicinus, *Westw. in Hope Cat.* i, p. 25 (1837).

Ochraceous or sanguineous; head, antennæ, subanterior transverse fascia (sometimes centrally broken) to pronotum, a little more than basal half of scutellum, and membrane, black: body

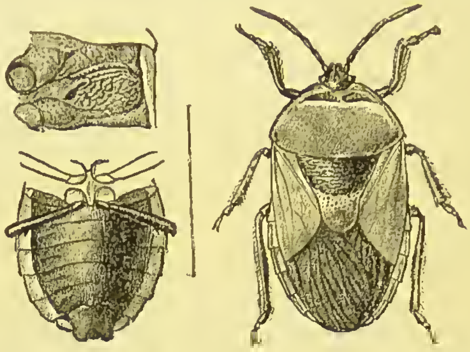

Fig. 179.—*Aspongopus janus.*

beneath and legs black or greenish black, lateral margins of sternum and abdomen ochraceous or sanguineous; antennæ with the third joint a little longer than first, shorter than remaining joints.

Length 16 to 20; breadth between pronotal angles 10 to 11 millim.

Hab. Hardwár (*Ind. Mus.*); Khási Hills (*Chennell*); Calcutta (*Ind. Mus.*); Bombay (*Leith*); Khandála (*Dixon*). Madras; Trivandrum; Bangalore. Ceylon (*Green & Lewis*). Burma; Minhla (*Comotto*).

443. **Aspongopus ochreus,** *Westw. in Hope Cat.* i, p. 25 (1837).

Body above and beneath, with the legs, ochraceous; antennæ fuscous, basal and apical joints and apex of fourth joint ochraceous; antennæ with the second and third joints about subequal in length, fourth slightly longer than fifth.

Length 17 to 20; breadth between pronotal angles 10 to 11 millim.

Hab. Bengal (*Oxford Mus.*). Khási Hills (*Chennell*).

444. **Aspongopus brunneus,** *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 45 (1783); *Dist. A. M. N. H.* (5) iii, p. 52 (1879).

Brownish-ochraceous, body beneath and legs more or less infuscated; antennæ fuscous, apical joint luteous, sometimes with its apex narrowly black; abdomen above red; third joint of the antennæ a little longer than the second, shorter than the fourth or fifth joints.

Length 17 to 20; breadth between pronotal angles 10 to 11 millim.

Hab. Bengal; Ranchi (*Irvine*), Calcutta (*Ind. Mus.*). Assam;

Nága and Khási Hills (*Chennell*), Margherita (*Doherty*). Bombay (*Leith*). Burma; Minhla (*Comotto*).—Also found in several islands of the Malay Archipelago.

445. **Aspongopus obscurus**, *Fabr.* (Cimex) *Ent. Syst.* iv, p. 107 (1794); *Stål, Hem. Fabr.* i, p. 38 (1868); *Dist. A. M. N. H.* (5) iii, p. 52 (1879).

Closely allied to the preceding species (*A. brunneus*), and differing by having the abdomen above black, not red, and the second and third joints of the antennæ subequal in length, not third joint longer than second.

Length 17 to 20; breadth between pronotal angles 10 to 11 millim.

Hab. Assam; Sibságar (*Coll. Dist.*). Bombay (*Leith*). Calcutta and Bangalore (*Ind. Mus.*).

446. **Aspongopus nepalensis**, *Westw. in Hope Cat.* i, p. 26 (1837).

Dark brownish-ochraceous or pale castaneous; extreme lateral margins of the pronotum black; antennæ black, apical joint luteous, narrowly black at base: body beneath and legs more or less cupreous; second and third joints of the antennæ subequal in length; abdomen above red.

Larger than the two preceding species, and differing from both in the combination of the colour of the upper surface of the abdomen, and the relative lengths of the second and third antennal joints.

Length 20 to 25; breadth between pronotal angles 11 to 13 millim.

Hab. Nepal (*Oxford Mus.*); Sikhim; Assam; Khási and Nága Hills (*Chennell*). Burma; Bhamo (*Fea*). Tenasserim; Malewoon (*Fea*).

According to Capt. Gorman, I.M.S., this species is found under stones in the dry river-beds of Assam. The animals are much sought after by the natives, who use them for food, pounded up and mixed with rice. Specimens were submitted to the British Museum for identification.

447. **Aspongopus singhalanus**, *Dist. A. M. N. H.* (7) vi, p. 222 (1900).

Bronzy-brown; antennæ, eyes, rostrum, and legs piceous; apical joint of antennæ, base of rostrum, and the tarsi ochraceous; antennæ thick, the second, third, and fourth joints deeply sulcate, second and third joints subequal in length or third a little longer than second, fourth and fifth joints subequal, fifth joint narrowest and cylindrical: body above finely rugulose and punctate; abdomen above reddish; rostrum reaching about halfway between the anterior and intermediate coxæ.

Length 18; breadth between pronotal angles 10 millim.

Hab. Ceylon (*Green & Lewis*).

Allied to *A. brunneus* and *A. obscurus*, from both of which it differs by the thick and deeply sulcate antennæ.

448. **Aspongopus nigriventris**, *Westw. in Hope Cat.* i, p. 26 (1837).

Above and beneath and legs brassy-black with a cupreous tinge; very finely punctured; pronotum and scutellum finely transversely rugulose; apical joint of the antennæ ochraceous, second and third joints subequal in length, shorter than fourth and fifth; posterior tibiæ slightly dilated about middle.

Length 19 to 21; breadth between pronotal angles 10 to 11 millim.

Hab. Bombay; Bor Ghat (*Dixon*). Malabar (*Coll. Dist.*).

Sago-Palm Bug. Usually hidden from view on the profusely branched pendulous spadices of the Sago-Palm (*Caryota urens*, Linn.). Greedily sucks the saccharine juices from the flowers, and when in a comatose state is frequently attacked and carried away bodily by the smaller ants, which devour the antennæ, proboscis, and even the feet. This remarkable bug is the principal agent through the aid of which the stigma in the Palm (*C. urens*) is pollinated. Common in the Bor Ghat in April and May (*R. M. Dixon*).

449. **Aspongopus sanguinolentus**, *Westw. in Hope Cat.* i, p. 26 (1837).

Aspongopus circumcinctus, *Walk. Cat. Het.* iii, p. 483 (1868).

Closely allied to *A. nigriventris*, but smaller, and with a broad lateral abdominal and a narrow lateral sternal reddish-ochraceous margin; corium sometimes tinged with purplish; connexivum ochraceous; extreme lateral margins of abdomen dull dark ochraceous; antennæ black, second and third joints almost subequal in length or second a little longer than third, fourth and fifth joints longest, fourth distinctly thickened and furrowed; posterior tibiæ not dilated.

Length 15 to 16; breadth between pronotal angles 9 to 9½ millim.

Hab. Assam; Shillong (*Coll. Dist.*). Burma; Karennee (*Fea*).—Originally described from Java.

450. **Aspongopus fuscus**, *Westw. in Hope Cat.* i, p. 26 (1837).

Aspongopus marginalis, *Dall. List Hem.* i, p. 350 (1851).

Allied to *A. sanguinolentus*, but a little larger and more elongate, the ochraceous connexivum and lateral margins beneath with obscure dark spots at the incisures; antennæ black, with the apical joint ochraceous, very narrowly fuscous or black at base and apex, third joint distinctly longer than the second; abdomen above red.

Length 18; breadth between pronotal angles 9½ to 10 millim.
Hab. Nága Hills (*Chennell*). Bombay (*Coll. Dist.*). Tenasserim; Meetan (*Fea*).—Originally described from Java.

451. **Aspongopus assamensis**, sp. n.

Closely allied to *A. sanguinolentus*, Westw., and *A. fuscus*, Westw. With the first it agrees in having the antennæ wholly black, not with the apical joint ochraceous as in *A. fuscus*; from both these species it differs by having the body above and legs laterally piceous, the body not margined with reddish or ochraceous; the upper surface of the abdomen is dull reddish with the connexivum black; the posterior tibiæ are very slightly dilated; second and third joints of antennæ subequal in length, fourth and fifth joints subequal, the fourth thickened and furrowed, the fifth cylindrical.

Length 15 to 17; breadth between pronotal angles 9 millim.
Hab. Assam; Khási and Nága Hills (*Chennell*), Margherita (*Ind. Mus.*).

452. **Aspongopus chinensis**, *Dall. List Hem.* i, p. 349 (1851).

Bronzy purplish-black; connexivum black, with transverse narrow dull reddish spots at the middle of the segments; antennæ pilose, black, apical joint ochraceous, its base black, second joint much longer than the third, fourth joint distinctly furrowed; body above very thickly, finely, and obscurely punctate; posterior tibiæ slightly dilated near base: body beneath more distinctly punctate than above.

Length 19; breadth between pronotal angles 9½ to 10 millim.
Hab. Sikhim; Mungphu (*Atkinson Coll., Brit. Mus.*). Khási Hills (*Chennell*).—The type was described from China.

Genus **MEGYMENUM**.

Megymenum, *Laporte, Ess. Hém.* p. 52 (1832); *Stål, Öfv. Vet.-Ak. Förh.* 1867, p. 522.
Pseudaradus, *Burm. in Silberm. Rev. Ent.* ii, p. 19 (1834).
Amaurus, *Burm. Nov. Act. Ac. Leop.* xvi, *Suppl.* p. 294 (1834).
Platydius, *Westw. Zool. Journ.* v, p. 446 (1835).
Subg. Anoplocephala *and* Pissistes, *Stål, En. Hem.* i, p. 88 (1870).

Type, *M. dentatum*, Boisd., from New Guinea.
Distribution. Oriental Region and Australasia.
Head large, the lateral lobes much longer than the central lobe and meeting beyond it, the margins tumid at the eyes and unarmed, or toothed or spined before the eyes; antennæ four-jointed, second and third joints much compressed; mesosternum deeply furrowed; pronotum centrally tuberculous or only tumescent; lateral margins of the abdominal segments produced posteriorly into a lobe or tooth, between which is a much smaller lobule or tooth.

A. *Head with the margins tumescent or angulated, but not spined before the eyes.*

453. **Megymenum inerme,** *Herr.-Schäff.* (Amaurus) *Wanz. Ins.* v, p. 62, pl. 163, ff. G, H (1839); *Dall. List Hem.* i, p. 364 (1851).

Ovate, somewhat elongate; cupreous or brassy-black; antennæ very short, much compressed, the second and third joints broadly dilated; head with the lateral margins tumid but not spined in front of eyes; pronotum distinctly and prominently centrally tumescent on anterior area, the lateral margins obliquely angularly sinuate, the anterior angles obtuse; membrane pale ochraceous, infuscated beyond middle; abdominal margins somewhat finely tuberculate at the incisures.

Length 14 to 15; greatest breadth 7 millim.

Hab. Bengal. Assam; Margherita (*Doherty*).

454. **Megymenum brevicorne,** *Fabr.* (Cimex) *Mant. Ins.* ii, p. 294 (1787); *Stål, Hem. Fabr.* i, p. 38 (1868).

Differs from *M. inerme* in being a little broader and less elongate; anterior tumescence to pronotum a little more tuberculous; lateral margins more concave anteriorly, more prominently angulated at centre; lateral margins of abdomen a little more prominently and broadly tuberculate at the incisures.

Length 13 to 14; greatest breadth 7 to 8 millim.

Hab. Khási Hills (*Chennell*). Calcutta (*Ind. Mus.*). Burma; Rangoon (*Fea*). Nicobar Islands (*Coll. Dist.*).—Also reported from China.

455. **Megymenum parallelum,** *Voll. Faun. Ind. Néerl.* iii, p. 48, pl. iv, f. 10 (1868); *Stål, En. Hem.* i, p. 232 (1870).

Cupreous or brassy black; membrane pale ochraceous, more or less infuscated; head with the lateral margins tumid or slightly angulated, but not spinous before the eyes; pronotum with the anterior angles somewhat longly spinous, the anterior lateral margins deeply concavely sinuate, strongly produced from before middle to base, with the outer margin crenulate and irregularly sinuate; abdominal margins obtusely but prominently tuberculated at incisures and with a much smaller tubercle at centre of each segment; antennæ blackish, apical joint ochraceous with its base black.

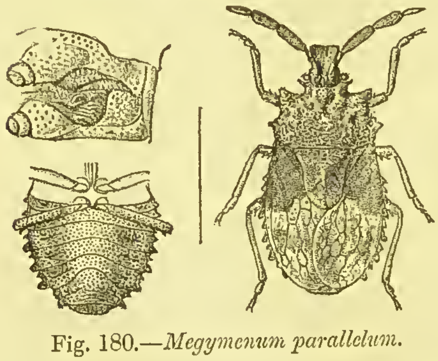

Fig. 180.—*Megymenum parallelum.*

Length 15 to 18; greatest breadth 9 to 10 millim.

Hab. Sikhim. Assam; Margherita (*Ind. Mus.*). Andaman Islds.; Port Blair (*Mehlola*).—Also received from Java and Sumatra.

456. **Megymenum severini**, *Bergr. Ann. Soc. Ent. Belg.* xxxvi, p. 504 (1892).

The principal characters relied on by Bergroth appear to be the unarmed head in front of eyes, the second joint of the antennæ compressed but not ampliated; pronotum with a large tubercle on the anterior area; but specially the lateral margins of the abdomen, which are very broadly dilately lobate at the posterior area of each segment, and are without the intermediate small tubercle of *M. parallelum*.

Length 14 to 16; greatest breadth 9 to 10 millim.

Hab. Sikhim (*Coll. Dist.*). Kurseong (*vide Bergroth*).

B. *Head with the margins distinctly spined before the eyes.*

457. **Megymenum subpurpurascens**, *Westw.* (Platydius) *Zool. Journ.* v, p. 446, pl. 22, f. 8 (1834); *Stål, En. Hem.* i, p. 87 (1870).
Megymenum cupreum, *Guér. Voy. Coquille, Zool., Ins.* ii, pt. 2, p. 172 (1838); *Herr.-Schäff.* (Amaurus) *Wanz. Ins.* v, p. 61, f. 503 (1839).
Megymenum meratii, *Le Gillou, Rev. Zool.* p. 261 (1841).

Cupreous or brassy black; membrane ochraceous, posteriorly infuscated; head with the lateral margins prominently spined in front of eyes; antennæ with the second and third joints compressed and furrowed; pronotum with the anterior angles spinous, the anterior lateral margins concave, truncately produced from before middle to base, its outer margin finely and obscurely crenulate and the anterior and posterior angles moderately prominent; abdominal margins moderately tuberculate at the incisures, and obsoletely tuberculate between them.

Length $13\frac{1}{2}$ to 15; greatest breadth 8 to 9 millim.

Hab. Sylhet (*vide Atkinson*). Burma; Bhamo, Karennee, Palon (*Fea*).—A common Malayan species.

Genus BYRSODEPSUS.

Byrsodepsus, *Stål, En. Hem.* ii, p. 130 (1872).

Type, *B. coriarius*, Stål.

Distribution. India, Burma, Sumatra.

Body narrowly oval or subelongate, above moderately, beneath strongly convex; head not much more than half the length of pronotum, on each side sinuated, before the eyes moderately rounded, lateral lobes much longer than the central lobe, their apices separate and obliquely subtruncate; pronotum transversely impressed near centre, lateral margins straight and anteriorly obtusely crenulate; scutellum much shorter than pronotum; membrane with three or four basal areolas or cells; mesosternum

profoundly sulcated; metasternum large, sexangular, equally broad and long, base and apex obtusely sinuate; abdominal margin obsoletely erosed, the segmental angles slightly prominent; femora strongly spined near apices; antennæ four-jointed.

458. **Byrsodepsus coriarius**, *Stål, En. Hem.* ii, p. 131 (1872).

Pitchy-black; above with lateral areas of sternum and abdomen thickly and distinctly punctate; pronotum transversely rugulose; scutellum posteriorly longitudinally rugose; rostrum, disk of abdomen, some obsolete scattered spots to pronotum and apex of scutellum, a small distinct spot at base of scutellum, and some spots on lateral abdominal area paler (*pallescentibus*, Stål); sternum and abdomen at lateral area more or less griseous; second joint of the antennæ a little longer than the head, basal joint not quite reaching apex of head.

Length 19; greatest breadth 9 millim.

Hab. Sylhet (*Leyden and Vienna Mus.*).

459. **Byrsodepsus nigritus**, *Dist. Tr. E. S.* 1901, p. 112.

Piceous; rostrum and apical joint of antennæ (excluding base) brownish-ochraceous; antennæ with the second joint longest, third joint prominently dilated and slightly shorter than fourth joint; head coarsely and rugosely punctate, the lateral lobes long and well separated internally; pronotum rugosely punctate, a broad transverse impression on anterior area, which becomes foveate at lateral margins, the latter are obscurely crenulate; posterior margin a little concave in front of scutellum; scutellum transversely rugose; corium thickly and finely punctate; femora robust, armed on each side with a strong spine near apex.

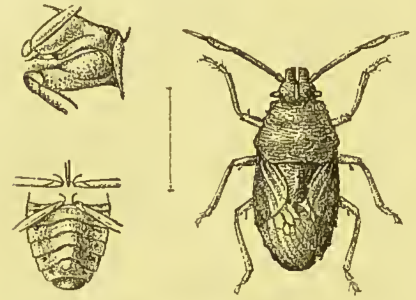

Fig. 181.—*Byrsodepsus nigritus.*

Length 12; breadth between pronotal angles $5\frac{1}{2}$ millim.

Hab. Burma; Palon (*Fea*).

Genus ATELIDES.

Atelides, *Dall. A. M. N. H.* (2) x, p. 360 (1852).
? Sagrina, *Spin. Gen. d'Ins. Artr.* p. 117 (1852).

Type, *A. centrolineatus*, Dall.

Distribution. India.

Body somewhat ovate, broadest behind the middle; head somewhat foliaceous, the lateral lobes much longer than the central lobe, their margins reflexed and their apices separated, a strong spine

in front of the eyes; antennæ four-jointed, basal joint not extending beyond the apex of the head, second and third joints prismatic; rostrum reaching the intermediate coxæ; pronotum subquadrate, narrower anteriorly than posteriorly, lateral angles subprominent; scutellum short and broad, the apex broad and rounded; corium very short, apical margins rounded; membrane not reaching apex of abdomen; mesosternum centrally sulcated; abdomen semicircular, slightly convex above and much more so beneath, with the apex somewhat truncated; legs stout, femora unarmed.

460. **Atelides centrolineatus**, *Dall. A. M. N. H.* (2) x, p. 360 (1852).
? Sagriva vittata, *Spin. Gen. d'Ins. Artr.* p. 117 (1852).

Above brassy-black; central lobe and inner margins of lateral lobes to head, eyes, lateral margins and a central fascia to pronotum, central fascia to scutellum, lateral margins and discal veins to corium, central fascia to abdomen above, and large spots to connexivum, ochraceous: body beneath and legs pale castaneous;

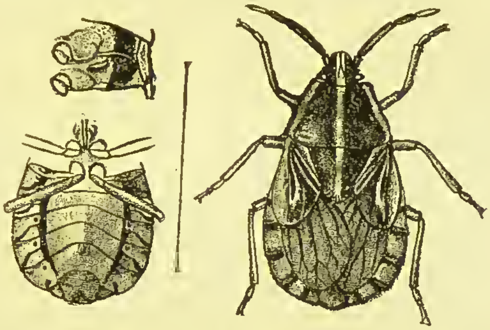

Fig. 182.—*Atelides centrolineatus.*

the extreme lateral margins, a broad sublateral fascia, margins of incisures, stigmata, and some waved linear fasciæ on lateral areas, black; antennæ black, first joint fulvous at base, apical joint fulvous.

Length 16 to 20 millim.
Hab. Sylhet (*Brit. Mus.*). Assam (*Ind. Mus.*).

Subfamily IX. PHYLLOCEPHALINÆ.

Phyllocephalidæ (part.), *Dall. List Hem.* i, p. 350 (1851).
Phyllocephalida, *Stål, Hem. Afr.* i, pp. 32 & 234 (1864).
Phyllocephalina, *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 645; *id. En. Hem.* v, p. 117 (1876).

Rostrum short, not or only just passing* the anterior coxæ; basal joint of antennæ not reaching apex of head, except in the genus

* In *Cressona* the rostrum just passes the anterior coxæ.

Cressona; head usually broad and foliaceous, or elongate and triangular, with the lateral lobes much longer than the central lobe.

A small subfamily, well represented in the Ethiopian and Oriental Regions, apparently unrepresented in the Nearctic and Neotropical Regions, occurring in the extreme Eastern area of the Palæaretic Region, and represented in Australasia.

Synopsis of Genera.

I. Head small, narrowed anteriorly, lateral lobes not much longer than central lobe; first joint of antennæ passing apex of head.
- *a*. Lateral angles of pronotum directed forward in long processes ...... CRESSONA, p. 291.

II. Head large, long or broad, lateral lobes much longer than the central lobe; first joint of antennæ not reaching apex of head.
- A. Posterior margin of pronotum not broader than base of scutellum.
  - a. Anterior angles of pronotum not produced.
    - *b*. Lateral angles of pronotum not, or only slightly, produced.
      - *a*¹. Head about as broad as long; scutellum and corium without pale margins or submargins .. DALSIRA, p. 291.
      - *b*¹. Head longer than broad; scutellum and corium with pale margins or submargins ...... SCHIZOPS, p. 293.
    - *c*. Lateral angles of pronotum angularly produced.
      - *a*². Scutellum of medium size, distinctly narrowed posteriorly. MERCATUS, p. 294.
      - *b*². Scutellum elongate, gradually (not suddenly) narrowed.
        - *a*³. Head narrowed, not acuminate anteriorly........ SALVIANUS, p. 294.
        - *b*³. Head triangular, acuminate. GONOPSIS, p. 295.
      - *c*¹. Head as long as pronotum or longer.
        - *a*². Head as long as pronotum, lateral lobes widely separated. DIPLORHINUS, p. 297.
        - *b*². Head longer than pronotum, lateral lobes contiguous .... RANDOLOTUS, p. 298.
  - b. Anterior angles of pronotum laminately produced.
    - *a*¹. Lateral margins of head straight in front of eyes .... TETRODA, p. 298.
    - *b*¹. Lateral margins of head incised and ampliated in front of eyes. GELLIA, p. 301.
- B. Posterior margin of pronotum broader than base of scutellum .... MEGARHYNCHUS, p. 301.

Genus CRESSONA.

Cressona, *Dall. List Hem.* i, p. 358 (1851); *Stål, Hem. Afr.* i, p. 234 (1864).

Type, *C. valida*, Dall.

Distribution. India, Burma, Siam.

Body oblong, ovate; head small, gradually narrowed anteriorly, lateral lobes longer than central lobe, but not meeting in front of it, antenniferous tubercles prominent at the sides of the head; antennæ five-jointed, basal joint passing the apex of head; rostrum just passing the anterior coxæ; pronotum with the lateral angles produced into long straight horns projecting forward beyond the apex of the head and somewhat compressed towards their apices, which are notched, their anterior lateral margins strongly dentate, the dentation strongly continued along the under surface of the lateral angles; membrane with longitudinal veins.

461. **Cressona valida,** *Dall. List Hem.* i, p. 358, pl. xi, f. 3 (1851).

Body above and beneath ochraceous, coarsely punctate on the pronotum and scutellum, more finely so on the corium; pronotum with two central longitudinal series of piceous punctures and with the scutellum and corium sometimes containing some scattered black points; membrane pale ochraceous, with some minute black speckles; pro- and mesosterna crossed by a narrow black fascia on each side near coxæ; abdomen with numerous black speckles; femora speckled with brownish.

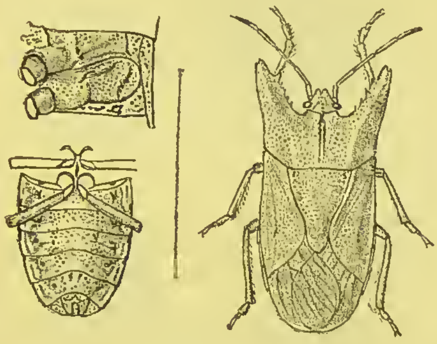

Fig. 183.—*Cressona valida.*

Length 23 to 25 millim.

Hab. Sikhim (*Coll. Atkinson*). Burma; Bhamo, Karennee (*Fea*).

Genus DALSIRA.

Dalsira, *Amy. & Serv. Hém.* p. 175 (1843); *Stål, En. Hem.* v, p. 118 (1876).

Phyllocephala (part.), *Dall. List Hem.* i, p. 352 (1851).

Type, *D. affinis*, Amy. & Serv., an African species.

Distribution. Ethiopian and Oriental Regions.

Body broadly elongate; head about as broad as long; antennæ five-jointed, basal joint not reaching the apex of head; rostrum reaching the anterior coxæ; pronotum with the lateral angles

prominent and very broadly rounded, the lateral margins obscurely dentate or crenulate; scutellum extending a little beyond the middle of the abdomen; membrane with longitudinal veins; mesosternum with a central ridge.

462. **Dalsira glandulosa,** *Wolff* (Edessa), *Ic.* v, p. 176, pl. xvii, f. 170 (1811); *Burm.* (Aelia) *Handb.* ii, p. 357 (1835); *Dall.* (Phyllocephala) *List Hem.* i, p. 353 (1851); *Stål, En. Hem.* v, p. 119 (1876).

Dull dark ochraceous, with some small scattered black freckles on head, pronotum, and scutellum; antennæ and eyes black, basal joint and bases of second, third, and fourth joints brownish; scutellum with a large, elongate, shining, greenish-black spot at

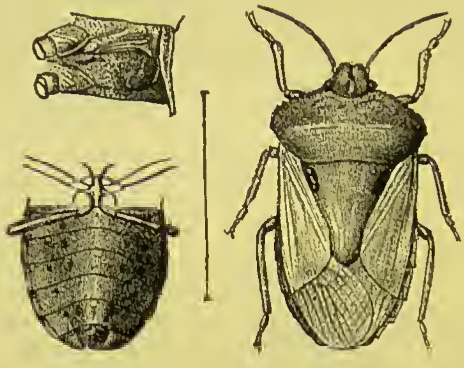

Fig. 184.—*Dalsira glandulosa.*

each basal angle; body beneath and legs a little darker than above.

Length 23 to 28; breadth between pronotal angles 13 to 15 millim.

Hab. Bengal. Assam; Khási and Nága Hills (*Chennell*). Burma; Bhamo (*Fea*).—Also received from Hainan Island and China.

463. **Dalsira scabrata,** *Dist. Tr. E. S.* 1891, p. 113.

Very dark castaneous; connexivum and abdomen beneath testaceous; antennæ fuscous, fourth and fifth joints pale luteous, rather more than apical half of fifth joint fuscous; membrane brownish-ochraceous; head very coarsely punctate, somewhat tessellate on basal half; second joint of antennæ a little shorter than third, third and fourth subequal, fifth longest; pronotum very coarsely rugose, with a distinct transverse ridge between the lateral angles, beyond which it is deflected anteriorly and distinctly transversely foveate, the lateral margins strongly and coarsely dentate, the lateral angles a little prominent, broadly rounded and coarsely dentate; scutellum transversely rugose; corium very

finely punctate and slightly wrinkled; rostrum dull ochraceous and reaching the anterior coxæ.

Length 17; breadth between pronotal angles 10 to 11 millim.

Hab. Burma; Karennee (*Fea*).

Genus SCHIZOPS.

Schizops, *Spinola* (Schyzops), *Essai*, p. 297 (1837); *Amy. & Serv. Hém.* p. 176 (1843).

Type, *S. ægyptiaca*, Lefebvre, a Palæarctic species.

Distribution. Palæarctic, Ethiopian, and Oriental Regions.

This genus is closely allied to *Dalsira*. Head triangular, lateral lobes much longer than central lobe, meeting beyond it, but a little divided at their apices; antennæ five-jointed, basal joint not reaching the apex of the head. *Schizops* differs principally from *Dalsira* in having the basal angular streak to the scutellum continued throughout its length to apex; the lateral margins of the corium are similar to those of the scutellum.

Only three species are known: one Palæarctic, extending as far as Aden at least; one from East Africa; and the third belonging exclusively to this fauna.

464. **Schizops insignis**, *Walk.* (Schismatops) *Cat. Het.* iii, p. 495 (1868); *Stål, En. Hem.* v, p. 120 (1876).

"Tawny, very thickly and minutely punctured, slightly clouded with blackish beneath; head a little longer than its breadth; lateral lobes lanceolate, contiguous except at their tips; eyes livid, not prominent; rostrum extending to the fore coxæ; antennæ black, second joint a little longer than the third; pronotum between the hind angles with a transverse ridge and an anterior slight metallic-green transverse furrow, the latter abbreviated at each end; space between the ridge and the hind border mostly piceous; hind angles acute, prominent; scutellum piceous, rounded at tip, with two testaceous stripes which are bordered with bright green on the outer side near the base; legs tawny; fore wings (*corium*) piceous, costa testaceous; membrane cinereous with many black points." (*Walker.*)

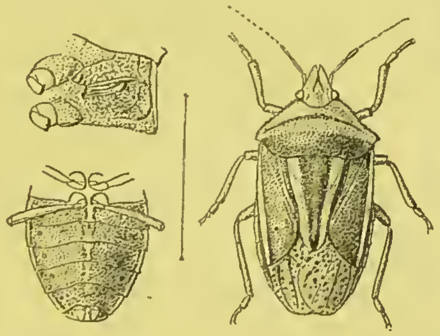

Fig. 185.—*Schizops insignis.*

Length 17 to 18 millim.

Hab. Burma (*Treacy, Brit. Mus.*); Rangoon (*Stockholm Mus.*).

Genus MERCATUS, nov.

Type, *M. illuminatus*, Dist.

Distribution. North India.

Head moderately narrowed anteriorly, lateral lobes longer than central lobe and united in front of it, margins slightly reflexed; antennæ with the basal joint not reaching the apex of head, second longer than third, remaining joints mutilated in type; rostrum reaching the anterior coxæ; pronotum broad, the lateral margins straightly oblique and serrate, the lateral angles somewhat strongly and angulately produced; scutellum moderately broad, narrowed beyond middle; corium with the lateral margins obscurely palely crenulate; mesosternum carinate.

Allied to *Basicryptus*, Herr.-Sch., from which it differs by the narrower head, which is slightly longer than broad, and by the more obscure crenulate or wrinkled margin of the corium.

465. **Mercatus illuminatus**, *Dist.* (Basicryptus) *Tr. E. S.* 1887, p. 358.

Body above dull dark reddish; pronotum with a broad discal transverse luteous fascia margined with black, attenuated at each end, and slightly notched beneath at centre; head with the eyes dull ochraceous; antennæ with the first, second, and third joints reddish, remainder mutilated in type; scutellum with a small luteous spot in each basal angle, with a few very small luteous spots at apex, and with some central and lateral black punctures; corium with the base of the lateral margin narrowly luteous and with some small and scattered black spots; membrane pale hyaline, with small fuscous spots: body beneath and legs dull reddish with blackish punctures; disk of sternum and some sublateral streaks to abdomen obscure luteous; tarsi somewhat ochraceous beneath.

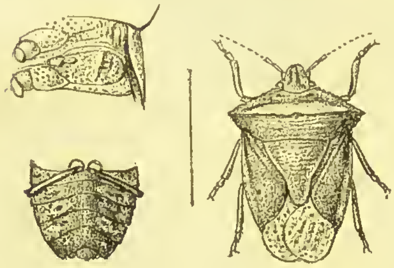

Fig. 186.—*Mercatus illuminatus.*

Length 14; breadth between pronotal angles 10 millim.

Hab. North India (*Coll. Dist.*).

Genus SALVIANUS, nov.

Type, *S. lunatus*, Dist.

Distribution. Assam; Burma.

Allied to the preceding genus (*Mercatus*), but differing by the structure of the scutellum, which is long, slender, and gradually, only slightly, narrowed posteriorly. In this last character *Salvianus* agrees with *Gonopsis*, but is distinguished from that genus by the

shape of the head, which is not triangular and pointed, but resembles that of *Mercatus*. The lateral angles of the pronotum are strongly produced and more or less anteriorly directed.

466. **Salvianus lunatus**, *Dist.* (Gonopsis) *Tr. E. S.* 1901, p. 113.

Sanguineous; antennæ luteous, sometimes tinged with sanguineous, apical joint black, with its base luteous; ocelli luteous; pronotum with a transverse fascia between the lateral angles bright luteous (in some specimens this fascia is absent) and with two transverse dull ochraceous patches on anterior area; scutellum with the lateral and apical areas more or less ochraceous; membrane pale hyaline: body beneath and legs sanguineous; pronotum with the posterior area rugulose and with a distinct transverse ridge between the lateral angles; scutellum transversely rugose; corium thickly and finely punctate; antennæ with the second and third joints short and subequal in length, fourth and fifth joints longer and subequal in length.

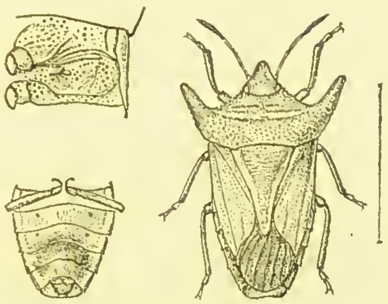

Fig. 187.—*Salvianus lunatus*.

Length 15 to 18; breadth between pronotal angles 11 to 13 millim.

Hab. Assam; Margherita (*Doherty*). Burma; Karennee (*Fea*).

467. **Salvianus dilatatus**, *Dist.* (Macrina) *A. M. N. H.* (5) iii, p. 52 (1879); *Waterh.* (Macrina) *Aid Ident. Ins.* t. 6 (1880).

Reddish-ochraceous; head and anterior area of pronotum paler in hue; a transverse, slightly-curved luteous fascia between the lateral pronotal angles, which are a little directed forward and have their apices black; scutellum with five indistinct, somewhat catenulate elevated ridges which are sprinkled with luteous, the central ridge usually the most indistinct; membrane pale fuscous: body beneath and legs concolorous, thickly and finely punctured with brown. At once separated from *S. lunatus* by the very much less forwardly produced pronotal angles.

Length 16 to 17; breadth between pronotal angles 11 to 12 millim.

Hab. Khási Hills (*Chennell*); Nága Hills (*Doherty*).

Genus GONOPSIS.

Gonopsis, *Amy. & Serv. Hém.* p. 180 (1843); *Stål, En. Hem.* v, p. 118 (1876).
Bessida, *Walk. Cat. Het.* iii, p. 577 (1868).

Type, *G. denticulata*, Amy. & Serv., an African species.

Distribution. Ethiopian and Oriental Regions and Japan.

Allied to *Salvianus*, but differing by the shape of the head, which is triangular and acuminate at apex; the body is also narrower and more elongate than in the two preceding genera.

468. **Gonopsis coccinea**, *Walk.* (Macrina) *Cat. Het.* iii, p. 497 (1868); *Dist. A. M. N. H.* (7) vi, p. 224 (1900).
Bessida scutellaris, *Walk. Cat. Het.* iii, p. 578 (1868).

Dull pale sanguineous; apical joint of the antennæ black, its base red; head and anterior area of the pronotum blackly punctate, posterior pronotal area rugulose, the lateral angles angularly produced somewhat forward and upward, a distinct transverse ridge between these angles, and the lateral margins distinctly serrate; scutellum sometimes marked as in *Salvianus dilatatus* and sometimes concolorous: body beneath a little paler than above; sternum thickly blackly punctate; abdomen with five longitudinal discal and lateral marginal series of black punctures, sometimes obsolete, and the stigmata black; legs pale sanguineous.

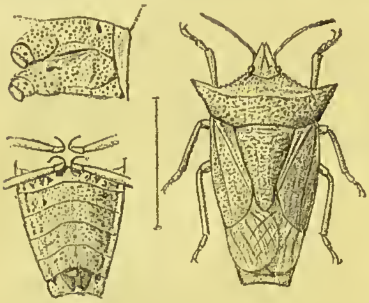

Fig. 188.—*Gonopsis coccinea.*

Length 14 to 18; breadth between pronotal angles 8 to 10 millim.

Hab. Sikhim. Khási Hills (*Chennell*). Burma; Bhamo, Karennee, Palon (*Fea*). Tenasserim; Myitta (*Doherty*).—Also found in the Malay Peninsula.

469. **Gonopsis rubescens**, *Dist. Tr. E. S.* 1887, p. 359

Allied in colour and general characters to *G. coccinea*, but differing by the pronotal angles, which are less produced and straight, not upward and forward as in Walker's species; the transverse ridge between the pronotal angles is also straighter and more distinct.

Length 14; breadth between pronotal angles 7 millim.

Hab. Sikhim (*Coll. Dist.*).

470. **Gonopsis diversa**, *Walk.* (Megarhynchus) *Cat. Het.* iii, p. 498 (1868).

Dark reddish-ochraceous; scutellum ochraceous, sometimes the head and pronotum also ochraceous; head and anterior area of pronotum blackly punctate, the posterior pronotal area usually but not always less distinctly punctate, a straight well-pronounced ridge between pronotal lateral angles, which are only slightly broadly angularly produced; apical joint of antennæ, excluding base, fuscous or black; scutellum with five more or less distinct

longitudinal catenulate ridges; corium more thickly and finely punctate: body beneath punctured as in the preceding species. The principal character in this species is to be found in the short, obtuse, pronotal angles.

Length 12 to 17; breadth between pronotal angles 7 to 8 millim.

Hab. Bombay (*Coll. Dist.*); Bor Ghat (*Dixon*).

471. **Gonopsis pallescens**, sp. n.

Above and beneath with legs luteous. Closely allied to the preceding species (*G. diversa*), but apart from the different colour may be distinguished by the more acutely pointed pronotal angles, the posterior pronotal area distinctly rugulose, apical joint of the antennæ concolorous, not fuscous, &c.

Length 14; breadth between pronotal angles 7 millim.

Hab. Mysore (*Coll. Dist.*).

Genus **DIPLORHINUS**.

Diplorhinus, *Amy. & Serv. Hém.* p. 178 (1843); *Stål, En. Hem.* v, p. 118 (1876).

Type, *D. furcatus*, Westw., a Malayan species.

Distribution. Oriental Region.

Obovate; head about as long as pronotum, with the lateral lobes prolonged, widely separated, their apices acuminate; antennæ five-jointed, third joint passing apex of head; pronotum posteriorly rugose, lateral angles somewhat strongly and acuminately produced, lateral margins serrate; corium with the apical margins rounded; membrane not quite reaching the apex of abdomen; rostrum reaching the anterior coxæ; mesosternum centrally carinate; abdomen beneath with very obscure indications of a central furrow.

472. **Diplorhinus quadricornis**, *Stål, En. Hem.* v, p. 122 (1876).

Diplorhinus furcatus, *Dall.* (*nec Westw.*) *List Hem.* i, p. 359 (1851).

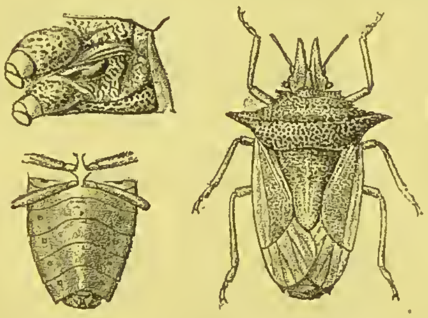

Fig. 189.—*Diplorhinus quadricornis.*

Head and pronotum brownish-ochraceous, scutellum and corium paler ochraceous; veins of membrane dark brown: body beneath and legs pale brownish-ochraceous, stigmata black; head distinctly punctate, extreme margins darker; posterior area of pronotum rugulose, apices of lateral angles dark castaneous; scutellum finely punctate, with

a central pale levigate line; corium thinly and finely punctate; antennæ reddish-ochraceous.

Length 20 to 22; breadth between pronotal angles 11½ to 12½ millim.

Hab. Assam (*Atkinson Coll.*). Burma; Rangoon (*Fea*).

Genus **RANDOLOTUS**, nov.

Type, *R. elongatus*, Dist.

Distribution. N.W. India.

Body very elongate; head longer than the pronotum, central lobe small, lateral lobes very long, contiguous and obtusely acuminate anteriorly; antennæ short, and apparently five-jointed and not reaching apex of head, but mutilated in type-specimen; rostrum reaching the anterior coxæ; pronotum with the anterior and posterior margins concave, the anterior angles slightly acute, the lateral margins obliquely rounded, posterior angles rounded, not produced, disk without any transverse ridge; scutellum long, slender, margins almost straight; corium with the posterior angles somewhat acutely produced; membrane with longitudinal veins and scarcely reaching apex of abdomen; mesosternum centrally carinate; abdomen beneath convex and faintly centrally furrowed to the fifth segment.

Allied to the Ethiopian genus *Dichelorhinus*, Stål.

473. **Randolotus elongatus**, sp. n.

Uniformly ochraceous; scutellum with the lateral margins rather broad, coarsely and blackly punctate for half their length; fourth joint of antennæ black (fifth joint mutilated in type); head, pronotum, and scutellum coarsely punctate; corium more finely punctate; anterior area of pronotum with two small transverse opaque impressions; head beneath and sternum somewhat coarsely punctate; abdomen beneath finely punctate; stigmata black.

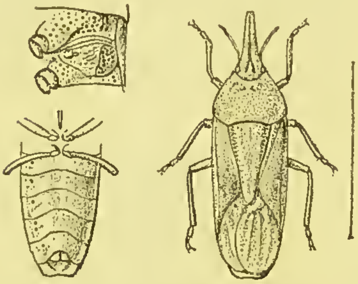

Fig. 190.—*Randolotus elongatus.*

Length 22; breadth between pronotal angles 6½ millim.

Hab. North-west India; Hardwár (*Coll. Dist.*).

Genus **TETRODA**.

Tetroda, *Amy. & Serv. Hém.* p. 177 (1843); *Stål, En. Hem.* v, p. 118 (1876).

Type, *T. histeroides*, Fabr.

Distribution. Oriental Region.

Subovate; head with the lateral lobes long, acuminate, well separated, lateral margins nearly straight; antennæ five-jointed, basal joint not reaching apex of head; pronotum with the anterior angles laminately produced anteriorly into broad apically acute processes, lateral margins obscurely crenulate; scutellum gradually narrowing posteriorly; membrane reaching apex of abdomen; connexivum exposed; rostrum reaching the anterior coxæ; meso- and metasterna centrally carinate.

a. *Lateral lobes of head pointed and somewhat divergent.*

474. **Tetroda histeroides**, *Fabr.* (Acanthia) *Ent. Syst., Suppl.* p. 526 (1798); *id.* (Aelia) *Syst. Rhyng.* p. 189 (1803); *Amy. & Serv. Hém.* p. 178 (1843).
Aelia furcata, *Fabr. Syst. Rhyng.* p. 188 (1803); *Herr.-Sch.* (Phyllocephala) *Wanz. Ins.* vii, p. 70, f. 738 (1844).
Megarhynchus quadrispinosus, *Westw. in Hope Cat.* i, p. 19 (1837).
Var. sumatrana, *Ellenr. Nat. Tijdschr. Nederl. Ind.* xxiv, p. 171 (1862).
Tetroda bilineata, *Walk. Cat. Het.* iii, p. 494 (1868).
Stoll, Pun. f. 197.

Ochraceous or dark brownish-ochraceous; scutellum with a pale luteous fascia on each side; antennæ piceous; membrane pale greyish, with the veins brownish.

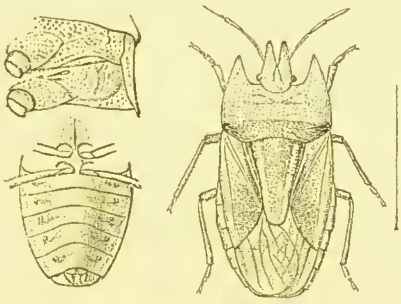

Fig. 191.—*Tetroda histeroides.*

A variable species, some specimens being piceous above, with only traces of the luteous fasciæ to the scutellum; the legs piceous and the body beneath brownish-ochraceous.

Length 15 to 18 millim.

Hab. Sikhim. Assam; Nága Hills (*Chennell*). Burma; Bhamo, Karennee (*Fea*).—Also common throughout the Malay Peninsula.

475. **Tetroda transversalis**, *Westw.* (Megarhynchus) *in Royle's Ill. Bot. Himal.* p. liv, pl. x, f. 7 (1839); *Dall, List Hem.* i, p. 356 (1851).

Body above and beneath with legs dark fuscous-brown, inclining to piceous; membrane greyish-white, opaque, with the veins brownish; antennæ piceous, apex of fifth joint obscurely ochraceous; head thickly and somewhat coarsely punctate, lateral lobes obtusely pointed and directed outwardly; pronotum with two transverse black areolets on anterior area.

Length 15; breadth between pronotal angles 7 millim.

Hab. North India (*Capt. Boys, Brit. Mus.*).

476. **Tetroda divaricata**, *Dall. List Hem.* i, p. 356 (1851).

General form and shape of *T. transversalis*, but ochraceous, somewhat thickly punctate; antennæ, extreme margins of lateral lobes of head, extreme lateral margins of pronotum, and base of lateral margin to corium piceous; membrane greyish, opaque, the veins brownish; body beneath and legs, especially the abdomen, darker in hue and moderately but distinctly punctate.

Length 13; breadth between pronotal angles 7 millim.

Hab. Nepal (*Hardwicke, Brit. Mus.*).

b. *Lateral lobes of head with their apical margins broadly rounded.*

477. **Tetroda atomaria**, *Dall. List Hem.* i, p. 356 (1851).

Head ochraceous, thickly and faintly punctured; lateral lobes nearly meeting at the apex, lateral margins straight; pronotum with the anterior portion ochraceous, obscurely punctate, becoming fuscous anteriorly with numerous small elevated ochraceous points; scutellum piceous, punctate, with ochraceous points as on pronotum, these on apical half forming two central lines, an elongate levigate luteous spot near each basal angle; corium more or less piceous, with several irregular longitudinal ochraceous lines, darkest on interior area; membrane greyish-white, opaque: body beneath and legs ochraceous, with a sublateral black fascia on each side, more or less broken and interrupted; stigmata pale ochraceous; sternum and femora punctured with brownish; rostrum ochraceous; antennæ pale luteous (apical joint mutilated in type). Lateral lobes of the head with their apical margins broadly rounded.

Length 13; breadth between pronotal angles 7 millim.

Hab. North India (*Boys, Brit. Mus.*).

478. **Tetroda obtusa**, *Dall. List Hem.* i, p. 357 (1851); *Stål,* (Gellia?) *En. Hem.* v, p. 124 (1876); *Atkins.* (Gellia) *J. A. S. B.* lviii, p. 106 (1889).

Ochraceous, thickly and finely punctate; lateral margins of the head with a minute black spine apically ochraceous on each side in front of eyes; pronotum with an indistinct transverse ridge on the posterior area; scutellum with an elongate black spot at each basal angle and with a few scattered black punctures: membrane very pale luteous, opaque: body beneath and legs ochraceous, with a large transverse impunctate fovea on each side of each segment, a few black punctures near each of the stigmata; sternum rather coarsely punctate, with a few scattered black points and an oblong black spot on each side of the metasternum; antennæ and rostrum ochraceous, the last with the apex black. Lateral lobes of the head broad and rounded anteriorly.

Length 13; breadth between pronotal angles 7 millim.

Hab. North India (*Boys, Brit. Mus.*).

Genus GELLIA.

Gellia, *Stål, Hem. Afr.* i, p. 243 (1864); *id. En. Hem.* v, p. 118 (1876).

Type, *G. albivittis*, Germ., an African species.

Distribution. Ethiopian and Oriental Regions.

Gellia is allied to *Tetroda* and is to be separated from it by the structure of the head, which is much dilated, foliaceous, with the lateral margins distinctly incised in front of eyes and then abruptly rounded to apex; the lateral lobes are not widely separated.

479. **Gellia nigripennis**, *Dall.* (Tetroda) *List Hem.* i, p. 357 (1851); *Stål, En. Hem.* v, p. 123 (1876).

Ochraceous, thickly and finely punctate; a transverse ridge between lateral angles and the basal margin of pronotum, basal and lateral margins of scutellum, and the membrane black; basal area of pronotum and inner area of corium fuscous-brown: body beneath and legs ochraceous, body with a sublateral black fascia on each side; apex of the rostrum piceous.

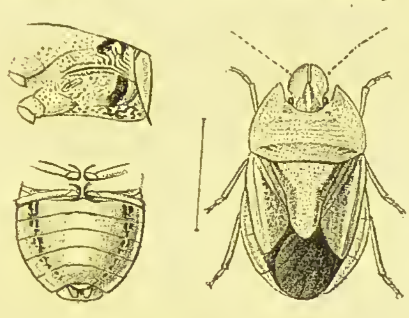

Fig. 192.—*Gellia nigripennis.*

Length $12\frac{1}{2}$ to 13 millim.

Hab. North India (*Boys, Brit. Mus.*). Karáchi (*Atkinson Coll.*). Bombay (*Coll. Dist.*).

Genus MEGARHYNCHUS.

Megarhynchus, *Lap. Ess. Hém.* p. 65 (1832); *Amy. & Serv. Hém.* p. 179 (1843); *Stål, En. Hem.* v, p. 118 (1876).

Type, *M. rostratus*, Fabr.

Distribution. Oriental Region and China.

Body very elongate; head sometimes longer than the pronotum, the lateral lobes acuminately produced, slightly separated at their apices; antennæ five-jointed, third joint about reaching the apex of the head; rostrum not reaching the anterior coxæ; pronotum with the posterior margin wider than the base of the scutellum, concave, with its lateral angles posteriorly produced, lateral margins almost straight and finely serrate, anterior margin concave; scutellum elongate, narrow, rounded at apex; corium long, its apical margin a little sinuate; mesosternum prominently carinate.

a. *Head longer than the pronotum.*

480. **Megarhynchus rostratus**, *Fabr.* (Aelia) *Syst. Rhyng.* p. 18 (1803); *Amy. & Serv. Hém.* p. 180 (1843).
Lygæus hastatus, *Fabr. Syst. Rhyng.* p. 239 (1803); *Dall.* (Megarhynchus) *List Hem.* i, p. 361 (1851).
Megarhynchus elongatus, *Lap. Ess. Hém.* p. 65 (1832).

Ochraceous; lateral margins of the head and pronotum and the corium purplish-red; extreme lateral margins of pronotum and corium luteous; membrane pale hyaline: body beneath and legs ochraceous, anterior tibiæ and tarsi and the antennæ purplish-red; abdomen with a stigmatal series of small black spots; head and pronotum somewhat coarsely punctate; scutellum longitudinally rugulose and with a few black punctures; corium thickly and finely punctate.

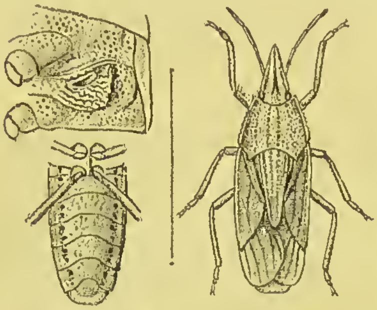

Fig. 193.—*Megarhynchus rostratus.*

Length 18 to 24 millim.

Hab. Sikhim. Assam; Sibságar (*Ind. Mus.*). Burma; Teinzo, Karennee, Palon (*Fea*). Tenasserim; Malewoon (*Fea*).—A common Malayan species, and received from China.

b. *Head shorter than the pronotum.*

481. **Megarhynchus truncatus**, *Westw. in Hope Cat.* i, p. 20 (1837).
Megarhynchus testaceus, *Amy. & Serv. Hém.* p. 180 (1843).

Dull ochraceous, punctured with fuscous, corium sometimes tinged with purplish; head finely punctate, much shorter than in preceding species, the lateral lobes only separate at extreme apices; pronotum somewhat convex, faintly rugulose; other characters generally as in *M. rostratus*, from which it may also be distinguished as a broader and more robust species.

Length 21 to 25 millim.

Hab. Assam; Nága Hills (*Doherty*), Khási Hills (*Chennell*). Burma; Palon (*Fea*).—Also reported from the Malay Peninsula, some islands of the Malay Archipelago, and from China.

482. **Megarhynchus limatus**, *Herr.-Sch. Wanz. Ins.* ix, p. 303, f. 998 (1853).

Closely allied to *M. truncatus*, but differing in having the head and pronotum slightly shorter, stature broader, punctuation stronger; the lateral pronotal margins are not luteous and are more strongly serrate; the lateral pronotal angles more obtusely prominent, &c.

Length 20 to 22 millim.

Hab. Assam. Burma; Bhamo (*Fea*).

Subfamily X. UROSTYLINÆ.

Urostylidæ, *Dallas, Tr. E. S.* n. s. ii, p. 15 (1852).
Urolabidina, *Stål, En. Hem.* v, p. 115 (1876).

Antennæ five-jointed, basal joint extending considerably beyond the apex of the head; rostrum short, scarcely passing anterior coxæ; head small, central lobe as long as the lateral lobes; antenniferous tubercles exserted; genitalia usually more or less produced; sternum not sulcate; odoriferous orifices spinous.

This small subfamily is more restricted to Northern India than any other subfamily of the Pentatomidæ, and it is there that the greater number of the species are found. Others, but fewer, are recorded from the Eastern Palæarctic Region, Malay Archipelago, and Australasia.

Synopsis of Genera.

a. Head provided with ocelli.
  a'. Basal joint of antennæ nearly as long as head and pronotum together; antennæ slender. . UROSTYLIS, p. 306.
  b'. Basal joint of antennæ not twice the length of head, much shorter than head and pronotum together; antennæ stout .... UROCHELA, p. 309.
b. Head without ocelli .... UROLABIDA, p. 303.

The genus described by Reuter under the name of *Eurhynchiocoris* belongs to this subfamily, but I have not seen it, and it is impossible from the description to arrange it in the synopsis, as Reuter has not mentioned the presence or absence of ocelli.

Genus **UROLABIDA**.

Urolabida, *Westw. in Hope Cat.* i, p. 45 (1837); *Dall. List Hem.* i, p. 313 (1851).
Urostylis (part.), *Westw. loc. cit.*
Calliprepes, *White, Charlesworth's Mag. Nat. Hist.* (n. s.) iii, p. 543 (1839).
Typhlocoris, *Herr.-Sch. Wanz. Ins.* v, p. 79 (1839), ix, p. 175 (1853).

Type, *U. tenera*, Westw.

Distribution. Oriental Region and China.

Body elongate, ovate; pronotum about as broad as the abdomen, the posterior angles not prominent; head small, ocelli absent, apex of central lobe a little prominent; antennæ in the male very long, slender, longer than the body, third joint shortest; antennæ in the female shorter; membrane indistinctly but thickly longitudinally veined; legs long and slender.

A. *Antennæ and legs longly pilose; lateral margins of pronotum and corium dilated.*

483. **Urolabida grayi**, *White* (Calliprepes), *Charlesworth's Mag. Nat. Hist.* (n. s.) iii, p. 543 (1839); *id. Tr. E. S.* iii, p. 94 (1842); *Dall. List Hem.* i, p. 316 (1851).

Greenish-luteous or pale ochraceous; two large basal sub-

triangular spots to pronotum, and a large elongate spot at each basal angle of scutellum, purplish-red; corium often much darker

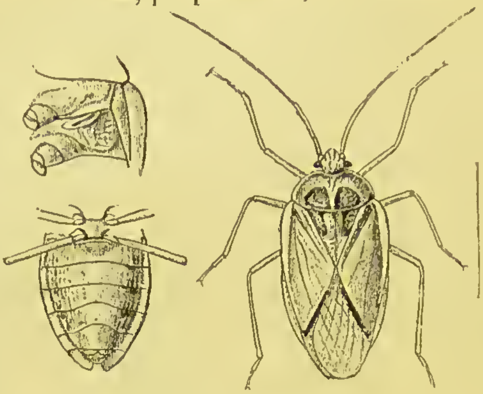

Fig. 194.—*Urolabida grayi.*

in hue; the clavus, anterior and apical margins pale luteous; membrane with a basal piceous line; rostrum just passing the anterior coxæ.

Length $14\frac{3}{4}$ to 16; breadth between pronotal angles $5\frac{3}{4}$ millim.

Hab. Nepal. Sikhim (*Coll. Dist.*).

B. *Antennæ and legs not pilose; lateral margins of pronotum and corium not dilated.*

484. **Urolabida chennelli**, *Dist. Tr. E. S.* 1887, p. 356.

Body above reddish-ochraceous, marked with black and luteous; head with the central and anterior portions luteous, eyes fuscous: antennæ with the first joint reddish-ochraceous (remainder mutilated in type); pronotum with a blackish discal semicircular line, between which and base the colour is paler and thickly punctured with fuscous, and two levigate luteous spots on the anterior disk; scutellum luteous, with three black basal spots, one central and one at each angle, a large rounded reddish-ochraceous spot divided by a central longitudinal luteous line, and the apical area thickly punctured with fuscous; corium with the inner claval and the apical margins black, these black lines outwardly and broadly margined with luteous, the costal margin of the same colour; membrane pale hyaline: body beneath and legs luteous; apices of the femora beneath and apices of the tarsi and rostrum blackish. Rostrum just passing the anterior coxæ.

Length 15 millim.

Hab. Nága Hills (*Chennell*).

485. **Urolabida khasiana**, *Dist. Tr. E. S.* 1887, p. 357.

Above luteous with reddish-ochraceous markings, a small black spot at each lateral pronotal angle, and two black spots on apical

margin of corium; head with some reddish-ochraceous markings behind the eyes, which are blackish; antennæ with the first and second joints ochraceous (remainder mutilated in type); pronotum with the anterior and lateral margins and two transverse fasciæ on disk reddish-ochraceous; scutellum with the lateral margins reddish-ochraceous; corium reddish-ochraceous, the lateral, claval, and apical margins luteous, the last with two prominent black spots; membrane pale hyaline: body beneath and legs luteous; apex of rostrum, a spot on apex of each femur beneath, and the apices of the tarsi black; rostrum reaching the middle of the mesosternum.

Length 14 millim.

Hab. North Khási Hills (*Chennell*).

486. **Urolabida histrionica**, *Westw.* (Urostylis) *in Hope Cat.* i, p. 46 (1837); *Stål, En. Hem.* v, p. 117 (1876).

Typhlocoris semicircularis, *Herr.-Sch. Wanz. Ins.* v, p. 79, f. 525 (1839).

Urolabida binotata, *Walk. Cat. Het.* ii, p. 415. 4 (1867).

Reddish-ochraceous; central area of head, a curved discal fascia, basal spot and extreme lateral margins to pronotum, clavus, inner and outer margins of corium, and an elongate spot occupying basal half of scutellum, virescent; a black spot about centre of apical margin to corium, somewhat narrowly extending to apex; antennæ dull ochraceous, apices of the joints piceous; rostrum reaching the middle of mesosternum: body beneath and legs luteous; body with a sublateral virescent fascia on each side and more or less tinged with purplish-red.

Length 10 to 12 millim.

Hab. North India (*Coll. Dist.*). Sikhim (*Atkinson*). Calcutta (*Ind. Mus.*). Burma; Bhamo, Rangoon (*Fea*).—Somewhat common in the Malay Peninsula.

This species is very variable in hue, all the markings, excepting the black spot on the apical margin of the corium, becoming obliterated as in the form *U. binotata*, Walk. This appears to be the dominant race in Calcutta.

487. **Urolabida tenera**, *Westw. in Hope Cat.* i, p. 45 (1837).

Luteous or virescent, probably the last colour in fresh specimens; pronotum and scutellum and outer area of corium coarsely darkly punctate; head and inner area of corium almost impunctate; extreme apical margin of corium distinctly darker; antennæ luteous, third joint and apical halves of fourth and fifth joints piceous; extreme lateral margins of corium pale, impunctate; rostrum reaching middle of mesosternum; male with an apical angulate process on each side of genital segment.

Length $14\frac{1}{2}$ to 16 millim.

Hab. Sikhim (*Coll. Dist. & Ind. Mus.*).

488. **Urolabida uniloba**, *Stål, En. Hem.* v, p. 117 (1876).

Closely allied to *U. tenera*, but smaller, antennæ shorter, basal joint only as long as the pronotum, extremity of the base of the second joint, all the third, and apical parts of the last two joints black; genital segment without a lateral process, median process much shorter, gradually narrowed, abruptly recurved from base, &c.

Length 10 to 12 millim.

Hab. Nága Hills (*Chennell*). Darjeeling (*Stockholm Mus.*).

Genus UROSTYLIS.

Urostylis (part.), *Westw. in Hope Cat.* i, p. 45 (1837); *Dall. List Hem.* i, p. 313 (1851).

Type, *U. punctigera*, Westw.

Distribution. Oriental and Eastern Palæarctic Regions.

Head provided with ocelli; antennæ very long and slender, basal joint nearly as long as the head and pronotum taken together; rostrum and pronotum as in *Urolabida*, body less elongate; membrane with seven longitudinal veins.

489. **Urostylis punctigera**, *Westw. in Hope Cat.* i, p. 45 (1837); *Dist. A. M. N. H.* (5) iii, p. 45 (1879).

Brownish-ochraceous with a greenish tinge, somewhat coarsely punctate, excepting discoidal area of corium, which is almost impunctate; pronotum, as described by Westwood, with two black central spots near the anterior margin, but these are usually absent or very small; corium with a black discal spot, its apical margin also narrowly black at centre and outer angle; scutellum with a small levigate ochraceous spot near each basal angle; membrane pale hyaline; antennæ more or less fuscous, "base of the fourth joint luteous" (mutilated in all examples now before me): body beneath and legs pale brownish-ochraceous; prosternum punctate, remaining surface finely and sparsely brown-speckled; rostrum not quite reaching middle of mesosternum, with its apex black.

Length $9\frac{1}{2}$ to $11\frac{1}{2}$ millim.

Hab. Sikhim (*Atkinson*). Khási Hills (*Chennell*).

490. **Urostylis gracilis**, *Dall. List Hem.* i, p. 315 (1851).

Head pale ochraceous, impunctate; pronotum, scutellum, and corium green, or in faded specimens ochraceous; membrane pale hyaline; body beneath and legs fulvous or ochraceous; tibiæ paler, tarsi brownish; rostrum not quite reaching the middle of the mesosternum, its apex black; antennæ long and slender, with "the basal joint orange, second greenish, third, fourth, and fifth brownish, the two latter with the base greenish-white"; apical margin of the corium concolorous and slightly rounded.

Length 10 millim.

Hab. Sikhim (*Atkinson*); Darjeeling (*Coll. Dist.*). Khási Hills (*Chennell*).

491. **Urostylis pallida**, *Dall. List Hem.* i, p. 315 (1851).

"Above pale greenish-yellow; head brownish; pronotum finely punctured with brown, with the lateral margins waved; scutellum more strongly punctured with brown than the pronotum; corium thickly and finely punctured, with the inner and outer portions of the apical margin black, the central portion yellow; membrane transparent, whitish, with a black spot in the inner basal angle: body beneath orange; abdomen with the disk smooth and shining, the sides reddish and faintly wrinkled; legs testaceous; femora covered with brown points, which towards the apex form a short line on each side; rostrum yellow with the tip black; antennæ with the basal joint testaceous, the remainder pale brown."

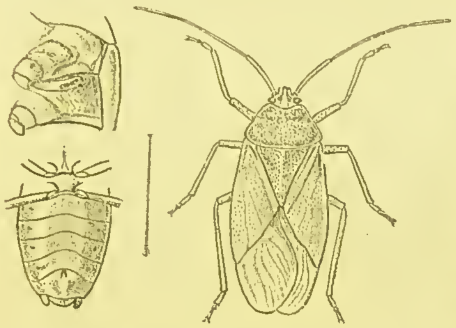

Fig. 195.—*Urostylis pallida.*

Length $13\frac{1}{2}$ to 14 millim.

Hab. Sikhim (*Atkinson*).

The type specimen in the British Museum is here figured.

492. **Urostylis fumigata**, *Walk. Cat. Het.* ii, p. 413. 10 (1867).
Urostylis philoides, *Walk. loc. cit.* p. 413. 11.
Var. *Dist. Sec. Yarkand. Miss., Rhynch.* p. 7 (1879).

Dull ochraceous or pale greenish, very finely darkly punctate; a small spot on each antennal base, a similar spot near each pronotal angle, apical half of extreme inner claval margin, and the extreme apical margin of corium black; antennæ with the first and second joints ochraceous, the third piceous, fourth and fifth piceous with their bases broadly luteous; scutellum with a small obscure levigate spot at each basal angle, the apex impunctate; membrane pale hyaline, somewhat streaked with ochraceous: body beneath and legs ochraceous; rostrum about reaching middle of mesosternum, its apex black; lateral margins of the pronotum slightly reflexed and distinctly sinuate.

Length $9\frac{1}{2}$ to $11\frac{1}{2}$ millim.

Hab. Punjab; Murree (*Stoliczka*). Sikhim; Mungphu (*Atkinson*). Sylhet (*Bowring*). Assam; Margherita (*Doherty*). Burma; Karennee (*Fea*).

I was formerly inclined to consider these two described forms

Walker as distinct species, each being represented by a single typical specimen in the British Museum—*U. fumigata* (female) and *U. philoides* (male). A study of larger material has, however, satisfied me as to their identity.

493. **Urostylis nigromarginalis**, *Reut. Berl. ent. Zeitschr.* xxv, p. 85 (1881).

Testaceous, above erectly pallidly pilose; pronotum, scutellum, and outer area of corium sparingly and coarsely ferruginously punctate; scutellum with a subtriangular fuscescent spot on basal area, which is a little more densely punctate; corium internally and towards apex very finely and obsoletely concolorously punctate; punctately impressed at claval suture, clavus also at the margin of scutellum with a series of strongly impressed punctures; lateral margin of corium narrowly black; membrane pale hyaline, the interior and basal margins, and an apical streak, fuscous; rostrum about reaching middle of mesosternum; antennæ rufous-testaceous, basal halves of fourth and fifth joints pallid.

Length $12\frac{1}{4}$ millim.

Hab. Darjeeling (vide *Reuter*).

I have not seen this species.

494. **Urostylis spectabilis**, sp. n.

Pale greenish; lateral margins of pronotum and corium bright ochraceous; extreme lateral edge of corium black; membrane pale fuliginous, margins, basal area, and central apical fascia dark brown; antennæ with the first and second joints brownish-ochraceous, third piceous, fourth piceous with nearly basal half luteous (fifth joint mutilated in type): body beneath pale greenish; lateral margins of sternum and lateral projecting margins of corium bright ochraceous as above; legs and rostrum pale luteous; pronotum and scutellum coarsely and somewhat darkly punctate; claval margins lineately coarsely darkly punctate, some oblique series of similar punctures on outer discoidal area of corium; rostrum reaching middle of mesosternum.

Length 13 millim.

Hab. Nága Hills (*Doherty*).

495. **Urostylis farinaria**, *Dist. Tr. E. S.* 1901, p. 114.

Very pale luteous, in some specimens inclining to ochraceous; eyes, apical areas of third, fourth, and fifth joints of antennæ, and a spot near centre of apical margin to corium black; pronotum and scutellum somewhat sparingly but coarsely punctate; inner and outer claval margins with a longitudinal series of coarse punctures; corium with the inner area impunctate, the outer area coarsely but sparingly punctate.

Length 10 to 12 millim.

Hab. Burma; Rangoon, Karennee (*Fea*).

496. **Urostylis notulata**, *Dall. Tr. E. S.* n. s. ii, p. 16 (1852).

"Ovate, pale testaceous; head rather small, triangular, broader than long; impunctate, faintly wrinkled, with a small oblique pit on each side within the eyes, apex of the lobes and whole underside of head pale yellow; antennæ clothed with very small whitish hairs; basal joint testaceous, becoming dusky towards apex and covered with minute brown punctures; second, third, and fourth joints brown, the last rather paler; rostrum pale yellow with the extreme tip black; pronotum pale testaceous, rather thickly punctured with brown, with an abbreviated red line on the middle of the anterior portion: the disk with a faint transverse furrow or impression before the middle; beneath testaceous, finely punctured with brown, and with a pale reddish patch within each antero-lateral angle; scutellum testaceous, rather thickly punctured with brown; meso- and metanotum beneath pale fulvous, smooth, impunctate, with a large, dull, pale-brown patch on each side; legs clothed with fine whitish hairs; femora yellow-testaceous, covered with fine brown points; tibiæ and tarsi dusky; corium testaceous, thickly and rather finely punctured, the punctures pale brown, the apical margin brown, with the median portion yellow; membrane transparent, colourless, with a dark brown spot on the inner basal angle; abdomen above bright red, shining, very finely wrinkled transversely, with a blackish line on each side within the margins; the margins brownish testaceous, edged with brown; abdomen beneath with the disk pale fulvous, flat, shining, finely wrinkled transversely, covered with very minute brown points; the sides red, the margins testaceous." (*Dallas.*)

Length $12\frac{1}{2}$ to $13\frac{1}{2}$ millim.

Hab. North India (*Dallas*).

I do not know this species. Neither type nor representative is in the British Museum.

Genus UROCHELA.

Urochela, *Dall. Tr. E. S.* n. s. i, p. 2 (1850); *id. List Hem.* i. p. 313 (1851).

Type, *U. quadripunctata*, Dall.

Distribution. Oriental and Eastern Palæarctic Regions.

This genus differs from *Urostylis* by having the antennæ stouter, and the basal joint not twice the length of the head, and shorter than the head and pronotum together; the species also have a broader and more robust structure than in *Urostylis.*

497. **Urochela quadripunctata**, *Dall. Tr. E. S.* n. s. i, p. 3, pl. ii, f. 1 (1850).

Urostylis lopoides, *Walk. Cat. Het.* ii, p. 414. 12 (1867).

Brownish-ochraceous, thickly punctate; lateral and anterior margins and a central line to pronotum, lateral margins and a

central line to scutellum, and basal lateral margins and narrow apical margin to corium, luteous; posterior lateral margin to corium and a spot in basal lateral margin, a spot on disk and another near centre of apical margin, black; connexivum luteous and black; abdomen beneath luteous, a spot on each segment within the stigmata and another on the lateral margin black;

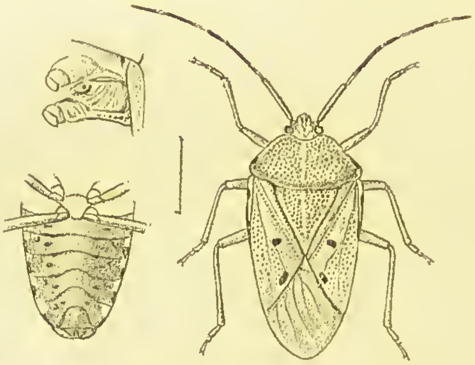

Fig. 196.—*Urochela quadripunctata.*

sternum, rostrum, and legs ochraceous; apex of rostrum piceous femora somewhat darkly punctate; antennæ with the basal joint brownish-ochraceous, remaining joints black, about basal halves of fourth and fifth joints luteous, base of second joint brownish-ochraceous.

Length 8 to 9 millim.

Hab. Bhutan. Sikhim; Mungphu (*Atkinson*). Very common on Observatory Hill, Darjeeling, at the end of the rains (*Atkinson*).

498. **Urochela guttulata,** *Stål, En. Hem.* v, p. 115 (1876).

Allied to *U. quadripunctata*, but larger, antennæ shorter and more slender, lateral margins of pronotum dilated, anteriorly roundly-amplified and obsoletely subserrate, slightly sinuate at centre; the levigate line on pronotum and scutellum much less distinct, sometimes partly evanescent; membrane palely speckled; sternum with a distinct, broad, sublateral black fascia.

Length 11 to 12 millim.

Hab. Sikhim (*Coll. Dist.*); Mungphu (*Atkinson*), Darjeeling (*Stockholm Mus.*). Nága Hills (*Doherty*).

499. **Urochela pilosa,** *Stål, En. Hem.* v, p. 116 (1876).

Dark ochraceous, sparingly but coarsely punctured with black; head impunctate; lateral margins of the pronotum and corium levigate, reddish-ochraceous; membrane very pale ochraceous; basal joint of antennæ ochraceous, remaining joints black, fourth and fifth joints luteous at base; corium with two spots, often

indistinct, and spots to connexivum black: body beneath and legs ochraceous; abdominal stigmata and an adjacent transverse line black. Allied to the preceding species (*U. guttulata*), but somewhat broader, dorsal punctuation stronger, lateral margins of pronotum anteriorly obtusely rounded, but not sinuated in the middle, and chiefly by its strong pilosity.

Length 10 to 10½ millim.

Hab. Khási Hills (*Chennell*). Nága Hills (*Doherty*). Darjeeling (*Stockholm Mus.*).

500. **Urochela obscura**, *Dall. List Hem.* i, p. 314 (1851).

"Above brown, somewhat obscure, densely and finely punctured; head impunctate, black, with a spot on each side within the eyes, a spot on the middle of the vertex, and the apices of the lateral lobes brown; lateral margins of the pronotum waved, narrowly edged with yellow; scutellum rather coarsely punctured with black, with the basal angles yellowish, the apex with an indistinct reddish longitudinal keel; corium clouded with blackish; membrane brown, opaque; connexivum black, with a yellow line on each of the sutures: body beneath reddish; abdomen impunctate, minutely wrinkled transversely, with the stigmata black; sternum finely punctured with black on the side, disk impunctate, black; legs brownish, femora with brown dots; rostrum brownish-testaceous, with the apex piceous; antennæ with the basal joint pitchy brown, paler at the base, second, third, and fourth joints black, fifth orange with the apex black." (*Dallas.*)

Length 10½ to 12 millim.

Hab. India (*Children & Hardwicke, Brit. Mus.*).

501. **Urochela bimaculata**, *Dall. List Hem.* i, p. 313 (1851).

Head, pronotum, and scutellum brownish-grey, thickly and finely punctured with black, head with two prominent black streaks at base and two much finer ones at apex; pronotum with the lateral margins waved, rounded anteriorly; corium very pale luteous, finely punctured with brown and with numerous scattered coarse black punctures, the centre of the disk with a large brown spot; membrane semitransparent, brownish; connexivum dark brown, with a yellow line on each of the sutures: body beneath fulvous; abdomen thickly and finely punctured with black, the stigmata and two rows of spots on each lateral area black; sternum, excluding disk, finely black punctured; legs ochraceous, femora thickly covered with fine black points, tibiæ brownish at apices, tarsi with the apical joint brown; antennæ piceous, basal joint brownish-ochraceous, speckled with black, basal halves of fourth and fifth joints pale luteous; rostrum slightly passing the middle of mesosternum, its apex piceous.

Length 13½; breadth between pronotal angles 5½ millim.

Hab. North India (*Boys, Brit. Mus.*).

502. **Urochela discrepans**, *Walk. Cat. Het.* ii, p. 411 (1867).

Allied to *U. bimaculata*, but more coarsely and less densely punctate, the lateral margins to the pronotum nearly straight, scarcely sinuate; head more produced anteriorly; antennæ piceous, the apical joint ochraceous, infuscated at apex; pronotum with two rounded black spots on anterior area and two elongate spots on disk, the extreme lateral margins black, very sparingly and coarsely punctate; scutellum with a spot in each lateral angle and two central fasciæ meeting near apex black.

Length 13½; breadth between pronotal angles 5½ millim.

Hab. Sikhim (*Coll. Dist.*)

503. **Urochela pulchra**, *Dist. Tr. E. S.* 1887, p. 356, pl. xii, f. 8.

Body above ochraceous, shaded and punctured with brownish; head and pronotum brownish, margins of the last olivaceous; antennæ brownish, second joint longer than first (remainder mutilated in type); scutellum olivaceous, with scattered coarse brown punctures and some mottled markings and a spot in each basal angle of the same colour; corium olivaceous, with large irregular coarse brown punctures on inner area, the clavus brownish; membrane brownish: body beneath brownish, laterally spotted with ochraceous; legs ochraceous, femora speckled with brownish; rostrum with the apex piceous.

Length 15 millim.

Hab. Sikhim (*Coll. Dist.*).

504. **Urochela ferruginea**, *Dist. Tr. E. S.* 1887, p. 356.

Body above brownish-ochraceous, very thickly and darkly punctate; head with the eyes fuscous, and two central lines of the same colour; antennæ fuscous, first and second joints subequal in length, third very short (remainder mutilated in type); pronotum with a central longitudinal line and the margins narrowly luteous; scutellum with a central longitudinal line, a linear spot at basal angles, the apex, and the margins narrowly luteous; corium with the margins narrowly and some longitudinal discal lines luteous; membrane fuscous: connexivum fuscous, with lineate, ochraceous spots: body beneath brownish-ochraceous, tinged with fuscous and with fuscous lateral spots; connexivum as above; legs brownish-ochraceous, apices of the tibiæ and tarsi fuscous.

Length 12 millim.

Hab. Assam (*Coll. Dist.*).

Genus **EURHYNCHIOCORIS**.

Eurhynchiocoris, *Reut. Berl. ent. Zeitschr.* xxv, p. 84 (1881).

Type, *E. sparsipunctatus*, Reut.

Distribution. Sylhet.

"Body oblong, parallel, somewhat flat; head horizontal, its length

equal to its breadth with eyes, lateral lobes acuminate, about twice shorter than clypeus, the latter anteriorly dilated, porrect, genæ subacuminate at apex, the superior margin more strongly rounded and very little longer than the lateral lobes; bucculæ twice shorter than head, laminately dilated towards apex, very depressed at base; rostrum long, slender, nearly reaching apex of fourth abdominal segment; first joint extending beyond the bucculæ, second almost twice longer than first, third about one half shorter than second and as long as fourth joint; antennæ with the first joint as long as the head, second almost one third longer than the first, third twice shorter than second; prosternum obtusely carinate at middle, and mesosternum at base."

A genus unknown to the writer.

505. **Eurhynchiocoris sparsipunctatus**, *Reut. Berl. ent. Zeitschr.* xxv, p. 85 (1881).

♂. Ferruginous-fuscous, opaque; pronotum with a basal submarginal impressed line, disk obsoletely rugose, irregularly sparingly sprinkled with rather large impressed black dots, here and there forming black spots; anterior lateral margin slightly sinuate about centre, black, testaceous at basal angles, two patches on the disk and a spot before the apex black, finely and sparingly punctate towards the base, strongly and densely blackly punctate towards the apex; clavus with a row of dots somewhat abrupt at margin of scutellum; corium with a row of impressed dots at claval suture and some adjacent black dots, with others situate in the exterior area; disk centrally almost impunctate, several irregular spots on exterior margin, median spot and another at apex of apical margin fuscous; membrane fuscous, with six to seven pale veins; sternum with four dark fuscous marginal dots on each side; abdomen above red, connexivum testaceous, with the segments centrally black.

Length 11 millim.

Hab. Sylhet (*Coll. Signoret*).

I have not seen this species.

Subfamily XI. ACANTHOSOMATINÆ.

Acanthosomina, *Stål, Öfv. Vet.-Ak. Förh.* (3) pp. 32, 39 (1872); *En. Hem.* v, p. 108 (1876).
Acanthosomida, *Stål, Hem. Afr.* i, p. 33 (1864).

Tarsi two-jointed; scutellum not reaching the middle of the upper surface of the abdomen, with the apex usually much narrowed; apical margin of corium straight, rarely rounded towards outer apical angle; tibiæ obtusely rounded.

The *Acanthosomatinæ* are generally distributed, but are concentrated in the Oriental and Australian Regions. Their distribution is very uneven, three or four genera only being known from the Ethiopian Region, whilst no fewer than nine genera are recorded from the restricted area of Chili.

Synopsis of Genera.

A. Basal joint of antennæ extending beyond the apex of head.
  a. Mesosternal ridge not produced backward between intermediate coxæ.
    a. Mesosternal ridge not or very slightly extending beyond anterior margin of prosternum.
      a'. Pronotal angles not prominently produced; pronotum anteriorly punctate, not levigate .... ACANTHOSOMA, p. 315.
      b'. Pronotal angles strongly or spinously produced; pronotum anteriorly levigate .... SASTRAGALA, p. 318.
    b. Mesosternal ridge extending considerably beyond anterior margin of prosternum .... ANAXANDRA, p. 321.
  b. Mesosternal ridge produced backward between intermediate coxæ . ... ELASMOSTHETUS, p. 326.
B. Basal joint of antennæ not reaching apex of head .... MICRODEUTERUS, p. 314.

Genus **MICRODEUTERUS.**

Microdeuterus, *Dall. List Hem.* i, p. 299 (1851); *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 640; *id. En. Hem.* v, p. 110 (1876).
Acanthosoma, part., *Herr.-Sch. Wanz. Ins.* viii, p. 5 (1848).

Type, *M. megacephalus*, Herr.-Sch.
Distribution. Oriental Region.

Head large, rounded in front, lobes of equal length; antennæ of five joints, basal joint stout, not reaching apex of head, second joint minute, third longest; rostrum long, reaching the base of the abdomen; body elongate-ovate; pronotum gibbous, lateral angles not produced, the margins distinctly prominent and levigate; scutellum small, longer than broad; membrane with longitudinal veins; sternum with a strong central laminate keel, widened and rounded anteriorly, about or almost reaching base of head; ventral spine short, scarcely passing the posterior coxæ.

506. **Microdeuterus megacephalus**, *Herr.-Sch.* (Acanthosoma) *Wanz. Ins.* viii, p. 5, f. 783 (1848); *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 640.

Ochraceous, brownly punctate, more thickly punctate on pronotum and corium, scutellum more sparsely punctate on apical area, head very finely and obscurely punctate; margins of pronotum distinctly levigate; scutellum with a more or less well-defined large blackish spot on basal area, and with a distinct central luteous levigate carination, on each side of which at apical area the surface is furrowed, its apex blackish; corium more or less purplish on apical area; connexivum purplish-brown with luteous spots, the

apical segmental angles acute, angles of the sixth segment strongly produced, blackish-brown: body beneath and legs ochraceous, abdomen speckled with purplish on each lateral area.

Length 12; breadth between pronotal angles 6 millim.

Hab. Bombay (*Leith*). Calcutta (*Atkinson*). Sikhim. Burma; Palon (*Fea*).

507. **Microdeuterus dallasi**, *Atkins. J. A. S. B.* lviii, p. 21 (1889).

Microdeuterus megacephalus, *Dall.* (*nec Herr-Sch.*) *List Hem.* i, p. 300, t. 10, f. 4 (1851).

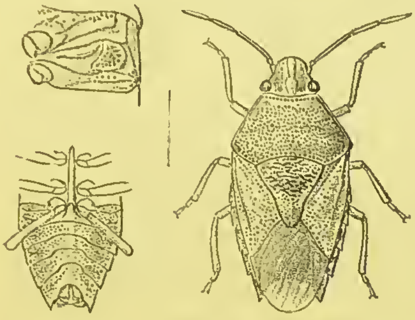

Fig. 197.—*Microdeuterus dallasi.*

This species was separated by Atkinson from *M. megacephalus* by the differences in the spinose posterior prolongations of the connexivum, which though present are much less produced; it is also more unicolorous above and smaller in size.

Length 9 millim.

Hab. North India (*Boys, Brit. Mus.*).

Genus ACANTHOSOMA.

Acanthosoma, *Curtis, Brit. Ent.* i, p. 28 (1824); *Dall.* (part.) *List Hem.* i, p. 198 (1851); *Fieb. Eur. Hem.* p. 327 (1861).
Clinocoris, part., *Hahn, Wanz. Ins.* ii, p. 70 (1834).
Oxydalus, *Muls. & Rey, Pun. France, Pent.* p. 324 (1866).
Elasmostethus, *Stål, Öfv. Vet.-Ak. Förh.* 1872, (3) p. 39.

Type, *A. hæmorrhoidale*, Linn., a Palæarctic species.

Distribution. Nearctic, Neotropical, Palæarctic, and Oriental Regions.

Head small, flat, triangular; antennæ five-jointed, first joint extending beyond the apex of the head; pronotum without carinate margins, the lateral angles moderately prominent; scutellum slightly longer than broad, its apex much narrowed; sternal ridge very high, abruptly lowered before the intermediate coxæ, rounded anteriorly and extending beyond the base of the head; apical angles of the sixth abdominal segment rounded at their apices in the male sex.

508. **Acanthosoma proximum**, *Dall. List Hem.* i, p. 303 (1851); *Dist. Sec. Yarkand Miss., Rhynch.* p. 7 (1879).

Above brownish or yellowish-green, coarsely punctate, the head, margins and lateral angles of pronotum paler in hue, the last, both above and beneath, with a roseate tinge; punctures blackish,

those on scutellum a little the deepest; corium finely punctate, its lateral area more coarsely and sparsely punctate: body beneath and legs ochraceous or greenish-ochraceous, apical margin of the sixth abdominal segment and the whole of the anal appendages pale sanguineous; prosternum coarsely punctate; antennæ with the first, second, and third joints olivaceous, their apices somewhat infuscated (remaining joints mutilated in type).

Length 15; breadth between pronotal angles 7½ millim.

Hab. North India (*Gen. Hardwicke, Brit. Mus.*).

509. **Acanthosoma distinctum,** *Dall. List Hem.* i, p. 304 (1851); *Reuter, Berl. ent. Zeitschr.* xxv, p. 75 (1881).

Above pale olive-green, rather thickly punctured with black; head pointed in front, finely punctured; pronotum with a transverse impunctate space towards the anterior margin, lateral angles prominent, subspinose, obtuse, ferruginous; scutellum brownish, becoming green towards the apex, with the apex itself whitish; membrane brownish, semitransparent, with a dark line

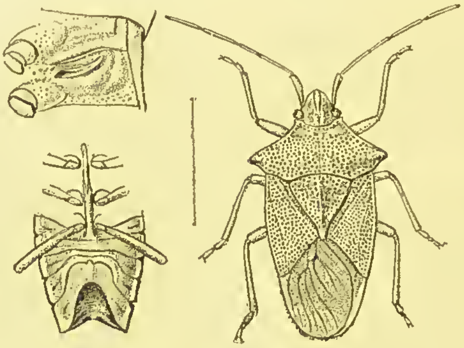

Fig. 198.—*Acanthosoma distinctum.*

at the base, surrounding the apical margin of the corium; abdomen above red, with the margins bright orange, with a black band at the junction of each segment: body beneath pale testaceous; abdomen in the male with the emargination of the apical segment very deep, reaching the middle of the abdomen, the margins spotted with black; legs pale greenish, with the tarsi fulvous.

Length 15 to 19; breadth between pronotal angles 9 to 10 millim.

Hab. North India (*Boys, Brit. Mus.*); Darjeeling.—A common species in Japan.

510. **Acanthosoma coralliferum,** *Horv. Termesz. Füzetek,* xii, p. 34 (1889).

Above olivaceous-green, underneath palely testaceous, prosternum and legs palely green; head nearly impunctate; pronotum

and scutellum remotely, corium densely blackly punctate; the last three joints of the antennæ infuscated; lateral angles of the pronotum "coralline," obtusely subcallous; membrane subhyaline; abdomen above weakly ferruginous, connexivum with the extreme segmental apical angles black; abdomen strongly carinate, basal spine long, almost reaching the anterior coxæ; sixth abdominal segment profoundly angulate-emarginate, the emargination in the male nearly reaching the middle of the abdomen; rostrum not extending beyond the intermediate coxæ, its apex black.

Length 14; breadth between pronotal angles 7½ millim.

Hab. Western Himalayas (*Nat. Mus. Budapest*).

I have not seen this species.

511. **Acanthosoma singhalense**, sp. n.

Pale greenish-ochraceous, somewhat coarsely punctate; apices of the pronotal angles, a small elongate spot on each side of the scutellum a little before apex, a small spot at interior apical angle and a larger spot at outer apical angle of corium, dark castaneous; anterior disk of scutellum, clavus, and apical margin of corium very pale castaneous; membrane pale hyaline, with a large castaneous spot on each lateral margin: body beneath and legs ochraceous; antennæ olivaceous, the last joint a little infuscated.

Length 10; breadth between pronotal angles 5 millim.

Hab. Ceylon; Peradeniya (*Coll. Dist.*).

512. **Acanthosoma forfex**, *Dall. List Hem.* i, p. 308 (1851); *Dist. Sec. Yarkand Miss., Rhynch.* p. 7 (1879).

Elongate, above pale olive-green, rather densely and strongly blackly punctate; head pale, with a few fine black punctures, the central lobe a little longer than the lateral lobes; pronotum with the lateral angles prominent and obtusely spinous, the lateral margins and angles reddish-brown; scutellum with the disk reddish-brown and with a central pale levigate line; membrane transparent, brownish: body beneath greenish or ochraceous tinted with red; abdomen centrally obtusely ridged; sexual organs greatly developed in the male, the lateral processes produced into two long curved spines, with a small brush of hairs at their apices and nearly as long as the abdomen; antennæ pale yellowish-green, becoming brown towards the apex.

Length 12½; breadth between pronotal angles 6½ millim.

Hab. Punjab; Murree (*Stoliczka*).

Acanthosoma immunda, Walk. Cat. Het. iii, p. 573 (1868), recorded as from India, is a very doubtful species, of which the type is reported to be in the National Museum, Melbourne. From the description it certainly does not appear to belong to the genus *Acanthosoma*.

Genus SASTRAGALA.

Sastragala, *Amy. & Serv. Hém.* p. 155 (1843); *Stål, Öfv. Vet.-Ak. Förh.* 1870, p. 638; *id. En. Hem.* v, p. 110 (1876).

Type, *S. uniguttata*, Don.

Distribution. Oriental Region, New Guinea, and Japan.

Pronotum anteriorly levigate, with a subanterior marginal row, sometimes double, of punctures; lateral angles of the pronotum horizontally produced, their apices obtusely rounded; scutellum narrowed at the apex; apical angles of sixth abdominal segment in male straight or somewhat acute, not rounded; mesosternal ridge not produced hindwards, and not or very slightly extending beyond the anterior margin of the prosternum, more or less distinctly rounded at apex.

A. *Scutellum with a large ochraceous spot.*

513. **Sastragala heterospila**, *Walk.* (Acanthosoma) *Cat. Het.* ii, p. 394 (1867); *Atk. J. A. S. B.* lviii, p. 29 (1889).
Sastragala affinis, *Atk. J. A. S. B.* lvii, p. 344 (1889).

Ochraceous, somewhat thickly punctate; head with the apex of the central lobe slightly prominent; pronotum with the lateral angles and a more or less well-defined fascia between them black; between this fascia and the base the punctures are black; scutellum black or blackly punctate, with a large levigate discal ochraceous spot, apex also pale luteous; corium with a small black spot at inner angle, and a lunate black fascia near outer apical margin; connexivum luteous, with the extreme apices of the segmental spines black, posterior margins of sixth segment black; antennæ ochraceous; abdominal spine passing the intermediate coxæ; rostrum about reaching the posterior coxæ.

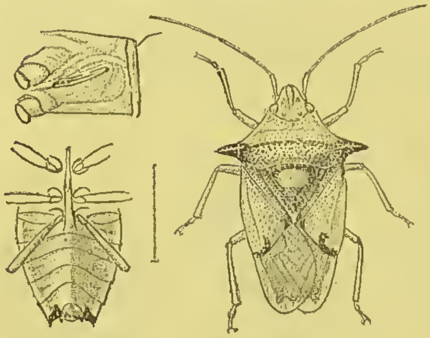

Fig. 199.—*Sastragala heterospila.*

Length 11 to 11½; breadth between pronotal angles 7 to 8 millim.

Hab. Punjab (*Brit. Mus.*). Bunkoti in Jaunsar, 9000 feet (*Atkinson*). Nilgiri Hills (*Hampson*).

514. **Sastragala uniguttata**, *Don.* (Cimex) *Ins. Ind., Hem.* pl. xiv, f. 5 (1800); *Dall.* (Acanthosoma) *List Hem.* i, p. 311 (1851); *Stål, En. Hem.* v, p. 113 (1876).

Allied to the preceding species (*S. heterospila*), but rostrum only reaching the intermediate coxæ, corium with the submarginal punctures black and without the black apical markings; in other

respects agreeing with Walker's species, and sometimes having the lateral pronotal spine and connecting transverse fascia black.

Length $8\frac{1}{2}$ to 10; breadth between pronotal angles $5\frac{1}{2}$ to 7 millim.

Hab. Khási Hills (*Chennell*).

515. **Sastragala parmata**, *Dist. Tr. E.* S. 1887, p. 353.

Body above brownish-ochraceous; pronotal spines reddish-brown; scutellum with a large cordate ochraceous spot surrounded with blackish; antennæ ochraceous, third and fourth joints somewhat darker, second and third subequal in length, a little shorter than fourth (fifth mutilated in type); pronotum sparingly and coarsely punctate, the lateral angles produced into long thick rounded spines, very slightly reflexed at apices; scutellum with the central spot levigate, remainder coarsely punctate, apex ochraceous; corium coarsely punctate, with the lateral margins luteous and levigate: body beneath and legs ochraceous; rostrum with the apex piceous.

Length 12; breadth between pronotal angles 9 millim.

Hab. North India (*Coll. Dist.*).

516. **Sastragala javanensis**, *Dist. Tr. E. S.* 1887, p. 353.

Body above pale brownish; head, lateral and anterior margins, and a transverse fascia across anterior disk of pronotum, and the lateral margins of the corium luteous; legs and pronotal lateral angles black; scutellum black, with a large round discal levigate ochraceous spot; antennæ ochraceous, second joint shortest, third and fourth joints longest and subequal in length; pronotum with the posterior disk coarsely punctate, the anterior portion impunctate, excepting a row of punctures on anterior margin, the lateral angles produced into long acutely pointed spines, very slightly reflexed at apices; scutellum, excepting the central spot, coarsely impunctate; corium thickly and coarsely punctate, excluding lateral margins which are levigate; membrane pale ochraceous and subhyaline; abdominal appendages black: body beneath and legs luteous; apical angles of last abdominal segment black; rostrum about reaching posterior coxæ.

Length 12; breadth between pronotal angles 10 millim.

Hab. Burma; Karennee (*Fea*).—Described from Java.

B. *Scutellum unicolorous, without pale central spot.*

517. **Sastragala rufispina**, *Dist. Tr. E. S.* 1887, p. 352.

Body above dark ochraceous, pronotal angles purplish-red; head finely and transversely wrinkled, apical portion of the central lobe excavated and foveate; (antennæ mutilated in type); pronotum, scutellum, and corium somewhat sparingly and coarsely punctate; pronotum with the lateral angles produced into obtusely pointed spines; membrane pale hyaline, blackish at base: body beneath

very pale ochraceous, legs a little darker in hue; rostrum with the apex piceous, and reaching the second abdominal segment; sixth abdominal segment with two small black spots at apex; pronotal spines red beneath as above.

Length 17; breadth between pronotal angles 11 millim.

Hab. North India (*Buckley*).

518. **Sastragala edessoides**, *Dist. A. M. N. H.* (7) vi, p. 228 (1900).

Luteous, coarsely and darkly punctate; antennæ luteous, apical half of third and all the fourth and fifth joints piceous; second joint a little longer than the third; pronotum and scutellum somewhat sparingly punctate, the corium much more thickly so; pronotal lateral angles long, robust, slightly ascending; abdomen above pale sanguineous, margins of connexivum ochraceous: body beneath and legs ochraceous, small stigmatal black spots, and two similar spots at the margin of apical segment.

Length 14 to 15; breadth between pronotal angles $9\frac{1}{2}$ to $10\frac{1}{2}$ millim.

Hab. Sikhim (*Atkinson Coll.*, *Brit. Mus.*); Nága Hills (*Doherty*).

The long robust pronotal angles prove this species distinct. It has a striking structural resemblance to some species of the American genus *Edessa*.

519. **Sastragala murreeana**, *Dist. A. M. N. H.* (7) vi, p. 228 (1900).

Ochraceous, coarsely black-punctate; lateral pronotal spines red, blackly punctate, long, directed forward and upward; body beneath and legs ochraceous, abdomen with reddish apical spots; antennæ with the second joint much longer than the third, apical half of third and all the fourth and fifth joints piceous; pronotum and corium somewhat thickly and coarsely punctate, the scutellum more sparingly so.

Length 14 to 15; breadth between pronotal angles $8\frac{1}{2}$ to 10 millim.

Hab. Punjab; Murree (*Atkinson Coll.*).

520. **Sastragala hampsoni**, *Dist. A. M. N. H.* (7) vi, p. 229 (1900).

Olivaceous, coarsely and darkly punctate; pronotal angles acute, directed outwardly; anal appendage provided with two long red forceps; antennæ olivaceous, apical half of third and the whole of fourth joint piceous (fifth joint mutilated in type), third joint slightly longer than second; head impunctate; the pronotum, scutellum, and corium about equally coarsely and sparingly punctate; body beneath and legs very pale yellowish-green.

Length 13; breadth between pronotal angles 9 millim.

Hab. Nilgiri Hills (*Hampson*).

521. **Sastragala elongata**, *Dall.* (Acanthosoma) *List Hem.* i, p. 309 (1851); *Dist. A. M. N. H.* (7) vi, p. 228 (1900).

Elongate; above yellowish-green, punctured with black; head

slightly wrinkled, impunctate, somewhat pointed in front, with the central lobe longer than the lateral; pronotum yellowish-green in front, reddish behind, coarsely and rather thickly punctured with black, with the exception of a transverse band near the anterior margin; lateral angles produced into strong, deep crimson spines, with their apices obtuse; scutellum coarsely but sparingly punctured with black, and with a reddish-brown triangular mark in the centre of the base; corium reddish internally, the outer margin and the greater portion of the apex yellowish-green, the whole surface thickly and strongly punctured with black and somewhat rugose; membrane brownish transparent: body beneath yellow, shining; abdomen impunctate with a strong central keel; sexual organs much developed, lateral process bright red, inner pieces flattened, yellow, widened and emarginate at the tip, which is black; legs greenish-testaceous, the tarsi dusky; apex of rostrum black; antennæ with the basal joint greenish-testaceous, remaining joints brown, becoming darker towards apex.

Length 14½ millim.

Hab. North India (*Boys*, *Brit. Mus.*).

522. **Sastragala binotata**, *Dist. Tr. E. S.* 1887, p. 353, pl. xii, f. 12.

Body above brownish-ochraceous, darkly punctate; corium with the lateral margins, widened into a spot at centre, dull ochraceous, inwardly shaded with blackish; membrane of a bronzy hue; head transversely wrinkled; antennæ ochraceous, third joint much longer than the second (remainder mutilated in specimen described); pronotum and scutellum sparingly and coarsely punctate, the corium more thickly and finely punctate; pronotum with the lateral angles produced into long, somewhat conical spines, their apices subacute and very slightly reflexed backwards: body beneath and legs ochraceous; rostrum reaching the third abdominal segment, its apex piceous; lateral lobes of the head a little longer than the central lobe.

Length 13; breadth between pronotal angles 10 millim.

Hab. Sikhim (*Coll. Dist.*). Burma; Ruby Mines (*Doherty*).

Genus ANAXANDRA.

Anaxandra, *Stål*, *En. Hem.* v, p. 110 (1876).

Type, *A. rufescens*, Dall.

Distribution. India.

Mesosternal ridge long, extending considerably beyond the anterior margin of the pronotum, with its apical portion prominent and gradually narrowed or acuminate; lateral angles of the pronotum strongly produced, the lateral processes directed a little forward and upward; apical angles of sixth abdominal segment in male somewhat obtuse.

A. *Scutellum more or less concolorous, without a large luteous basal spot.*

523. **Anaxandra rufescens,** *Dall.* (Acanthosoma) *List Hem.* i, p. 311 (1851); *Stål, En. Hem.* v, p. 114 (1876); *Reut. Berl. ent. Zeitschr.* xxv, p. 77 (1881).

Head olivaceous, impunctate; pronotum with the anterior area olivaceous, coarsely but sparingly punctured with black, and with a broad impunctate orange fascia near anterior margin, posterior area brownish-ochraceous rather thickly punctured with black, lateral angles produced into long ochraceous or reddish-ochraceous spines, with their apices slightly recurved, their basal portions punctate, their apices lævigate; scutellum olivaceous or reddish-ochraceous, sparingly and irregularly punctured with black, the apex pale, levigate; corium reddish-ochraceous, the outer margin broadly olivaceous, rather strongly blackly punctate; membrane pale brownish hyaline: body beneath and legs ochraceous; antennæ olivaceous, apex of third and the whole of fourth and fifth joints infuscated.

Length 14½ to 15; breadth between pronotal angles 13 millim.

Hab. Darjeeling (*Atkinson*). Nága Hills (*Doherty*).

524. **Anaxandra hamata,** *Reut. Berl. ent. Zeitschr.* xxv, p. 78 (1881); *Atk. J. A. S. B.* lviii, p. 34 (1889).

Closely allied to *A. rufescens*, Dall., but differing in the lateral processes of the pronotum, also, in the male, in the anterior margin before the apex being a little more distinctly convex and entirely sanguineous, and especially in the structure of the genitalia in the male. First genital segment about one-third shorter than preceding, apical margin slightly sinuate, second segment uncovered on the margin, straight in the middle, with two small bands subvertically placed in the middle itself, shortly but densely fulvous-pilose, apical angle produced into a long, somewhat incurved horn, which is furnished at the apex with a densely fulvous pilose fascicula, its exterior margin as long as the lateral margin of the preceding segments, inferior margin as long as the margin of the apical segment: *styli* briefly biramose at the apex, upper ramus narrow and acutely acuminate, apex somewhat curved, inferior broader and more obtuse, abruptly dentately contracted at the apex.

Length 15 millim.

Hab. Darjeeling.

I have seen nothing which I can identify with the above description given by Reuter, who does not state in what respects the lateral horns of the pronotum differ from those of *A. rufescens*, nor does he give the breadth between the same.

525. **Anaxandra lævicornis,** *Dall.* (Acanthosoma) *List Hem.* i, p. 311 (1851); *Dist. A. M. N. H.* (7) vi, p. 229 (1900).

Above pale yellowish-olivaceous; the central lobe of the head slightly passing the lateral lobes; pronotum thickly and rather coarsely punctured, lateral angles produced into long impunctate processes, sometimes luteous, directed forward, and of the same thickness from base to near the apex, which is acute and slightly recurved; scutellum rather strongly but not very thickly punctured; corium very thickly punctate; membrane brownish, hyaline: body beneath ochraceous or pale olivaceous; abdomen impunctate, but very finely wrinkled laterally, apex sometimes bright red; legs and rostrum testaceous or pale olivaceous; antennæ testaceous, with the third joint black except at base.

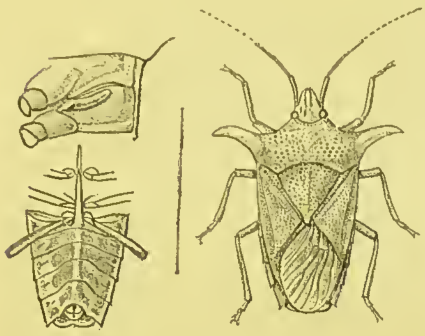

Fig. 200.—*Anaxandra lævicornis.*

Length 20 millim.

Hab. North-west Provinces (*Horne, Brit. Mus.*).

526. **Anaxandra cornuta,** *Dall.* (Acanthosoma) *Tr. E. S.* v, p. 193, pl. xix, f. 6 (1849); *Stål, En. Hem.* v, p. 114 (1876).

Olivaceous slightly clouded with luteous, rather thickly and strongly punctured; pronotum with the lateral angles strongly cornuted, the processes being more darkly coloured than the rest of the surface, the anterior lateral margins greenish beneath; scutellum acute, slightly sinuated on each side immediately before the apex; corium thickly and strongly punctured; membrane brownish at the base, particularly at the internal angles; antennæ concolorous, the apex and sometimes the whole of the joints piceous; legs pale brownish-ochraceous, with the tibiæ and tarsi a little darker; ventral spine long, reaching anterior coxæ.

Male. The pronotal processes dark olive-green, rounded at the apex, beneath flat, but not grooved; the membrane pale and semitransparent; abdomen above red, with broad whitish margins; body beneath pale ochraceous, with a reddish tinge towards the apex of the abdomen.

Female. The pronotal processes piceous, very acute, the apices recurved and tipped with bright orange, strongly channelled beneath; membrane brownish; abdomen beneath pitchy brown, darkest at apex, and palest at outer margins and along the median ridge; ventral spine pale, its apex brown; sternum brownish, with the ridge semitransparent; head beneath brownish.

Length 13; breadth between pronotal angles 10 millim.

Hab. Bhutan. Sikhim (*Atkinson*).

I have not seen this species and in the above description have relied on the diagnosis of Dallas.

527. **Anaxandra tauriformis**, *Dist. Tr. E. S.* 1887, p. 354.

Body above bright castaneous; lateral margins of the head, anterior and lateral margins and posterior disk of pronotum, lateral margins of scutellum, lateral margins of corium, and the membrane, ochraceous; antennæ with the first and second joints ochraceous (remainder mutilated in type); head transversely wrinkled, with a few dark punctures; pronotum sparingly and coarsely punctate on disk, thickly punctate on anterior margin; pronotal angles produced into long upwardly and forwardly directed processes, the apices of which are distinctly truncately reflexed backward, the processes sparingly punctate for about half their length; scutellum sparingly and coarsely punctate; corium thickly punctate; abdominal spines castaneous: body beneath and legs ochraceous; abdominal spines castaneous as above, but inwardly blackly margined.

Length 15; breadth between pronotal angles 14½ millim.

Hab. Khási Hills (*Coll. Dist.*).

528. **Anaxandra alaticornis**, *Walk.* (Acanthosoma) *Cat. Het.* iii, p. 573 (1868); *Dist. A. M. N. H.* (7) vi, p. 229 (1900).

Tawny, elongate-oval, shining, roughly punctured; head elongate, slightly acute; sides reflexed; eyes piceous; rostrum extending to the posterior coxæ, its apex black; antennæ piceous, slender; first and second joints testaceous, second as long as the third, fourth longer than third; pronotum pale testaceous along each side in front, with a broad testaceous band between the lateral angles, which are as long as the intermediate breadth and are broad and linear from the base to near the apices, where they are black, dilated, and recurved; abdomen ferruginous, pale testaceous at each lateral margin, black at apex; corium pale testaceous towards the base and at the apical margin, and with a large pale testaceous apical spot which extends to the lateral margin.

Length 11½ millim.

Hab. "Hindostan" (*Brit. Mus.*).

529. **Anaxandra nigricornis**, *Walk.* (Acanthosoma) *Cat. Het.* iii, p. 574 (1868); *Dist. A. M. N. H.* (7) vi, p. 229 (1900).
Anaxandra nigrocornuta, *Reut. Berl. ent. Zeitschr.* xxv, p. 77 (1881).

Olivaceous or brownish-ochraceous, blackly punctate; head and anterior and lateral margins of pronotum pale ochraceous: pronotum with the lateral angles produced into long black spines with their apices recurved, anterior margin coarsely black, punctate, behind which is a narrow transverse reddish impunctate space; scutellum with the apex pale luteous and impunctate; membrane pale brownish hyaline: body beneath and legs pale reddish-ochraceous; pronotal spines beneath olivaceous or ochraceous:

apical half of third joint and all fourth and fifth joints of antennæ piceous.

Length $13\frac{1}{2}$ to 16; breadth between pronotal angles 11 to 13 millim.

Hab. Sikhim (*Coll. Dist.*). Darjeeling.

530. **Anaxandra bovilla**, *Dist. A. M. N. H.* (7) vi, p. 229 (1900).

Brownish-ochraceous, thickly and coarsely punctate; pronotal angles very robustly developed, slightly recurved and pointed posteriorly at apices, which are pale and impunctate; antennæ with the second joint longer than the third; pronotum with the posterior area from between the lateral angles much more coarsely punctate, and margined anteriorly with an indistinct narrow waved castaneous fascia; scutellum very coarsely punctate, the apical margins somewhat raised and levigate, a central pale levigate line traversing the pronotum and scutellum; corium more thickly and finely punctate, with a discal levigate spot, which in some specimens is very indistinct, the lateral area darker and very coarsely punctate; membrane pale brownish: body beneath and legs brownish-ochraceous.

Length 10; breadth between pronotal angles 8 millim.

Hab. Assam (*Atkinson Coll.*). Nâga Hills (*Doherty*).

531. **Anaxandra compacta**, *Dist. Tr. E. S.* 1887, p. 355.

Body above ochraceous, with an olivaceous tinge; basal margin of head, a spot behind each eye, and the margins of the central lobe (not reaching apex), two circular enclosing lines near anterior margin of pronotum, and a large central rounded spot near base of scutellum black; pronotal angles castaneous; the pronotum and scutellum are very obsoletely and obscurely punctate, the corium finely but distinctly punctate; the pronotal angles are produced into short but very robust spines, their apices rounded above and subtruncate: body beneath ochraceous, much tessellated with black, pronotal spines castaneous as above.

Length 10; breadth between pronotal angles 10 millim.

Hab. Assam; Sadiya (*Chennell*). Burma; Karennee (*Fea*).

B. *Scutellum with a large luteous basal spot.*

532. **Anaxandra nigro-lineata**, *Stål, En. Hem.* v, p. 114 (1876).
Anaxandra fulvicornis, *Dist. Tr. E. S.* 1887, p. 354.

Body ochraceous, with an olivaceous tinge; anterior lateral margins of head, a central narrow longitudinal fascia commencing before apex of head and terminating on disk of pronotum, and the lateral margins of the scutellum, joined together before apex, black; antennæ with the basal joint ochraceous (remainder mutilated in type of *A. fulvicornis*); pronotum with the posterior disk coarsely punctate, the lateral angles produced into long, slightly ascending and forwardly directed dull luteous spines, their apices very slightly reflexed and subacute; scutellum with the basal two-thirds luteous, posteriorly rounded and margined with black; corium coarsely

punctate and rugulose; membrane of a bronzy hue: body beneath and legs ochraceous; mesonotum with an oblique black line on each side.

Length 15 to 17; breadth between pronotal angles 14 to 18½ millim.

Hab. Sikhim (*Coll. Dist.*). Darjeeling (*Stockholm Mus.*).

I was originally inclined to consider that the great disparity in size between Stål's *A. nigro-lineata* and my *A. fulvicornis* denoted specific difference; but after experience of the variation in size existing in other species of the genus, I am not prepared to maintain that view.

533. **Anaxandra sigillata**, *Stål, En. Hem.* v, p. 114 (1876).

Closely allied to *A. nigro-lineata*, but smaller, pronotal lateral prolongations shorter, above black, and at their apices anteriorly more strongly rounded; membrane more obscure; basal lateral margins of corium pale luteous; margins of the head concolorous, and pronotum without a black longitudinal line.

Length 13; breadth between pronotal angles 10 millim.

Hab. Cachar (*Coll. Dist.*). Burma; Karennee (*Fea*).

Genus ELASMOSTETHUS.

Elasmostethus, part., *Fieber, Eur. Hem.* pp. 78 & 328 (1861).
Clinocoris, part., *Hahn, Wanz. Ins.* ii, p. 70 (1834); *Stål, Öfv. Vet.-Ak. Förh.* 1872, 3, p. 39; *id. En. Hem.* v, p. 110 (1876).
Sastragala, *Fieber, Eur. Hem.* pp. 78 & 327 (1861).
Elasmucha, *Stål, Ann. Soc. Ent. Fr.* 1864, p. 54; *id. Öfv. Vet.-Ak. Förh.* 1870, p. 638.
Meadorus, part., *Muls. & Rey, Pun. France, Pent.* p. 315 (1866).

Type, *E. griseum*, Linn., a Palæarctic species.

Distribution. Palæarctic and Oriental Regions.

This genus is principally distinguished by the character of the mesosternal ridge, which is produced backward between the intermediate coxæ; the posterior lateral margins of the pronotum are narrowly depressed and moderately amplified.

A. *Lateral angles of the pronotum prominent, but not spinously produced.*

534. **Elasmostethus punctatum**, *Dall.* (Acanthosoma) *List Hem.* i, p. 306 (1851); *Stål* (Clinocoris), *En. Hem.* v, p. 114 (1876); *Leth. & Sev. Cat. Gén. Hém.* i, p. 257 (1893).

Greenish testaceous, coarsely punctate; head punctured with brown, central lobe just passing the lateral lobes; pronotum strongly and rugosely punctate, the punctures brown; scutellum triangular, with the apex much attenuated and produced, strongly but not thickly punctured with brown; corium very coarsely punctured, but with a small impunctate patch on the disk; membrane transparent, colourless; connexivum with a small spine at

the posterior angles of each segment, and with a small black spot on each segment at the posterior margin; abdomen beneath coarsely and sparingly punctured on the lateral areas, the disk impunctate

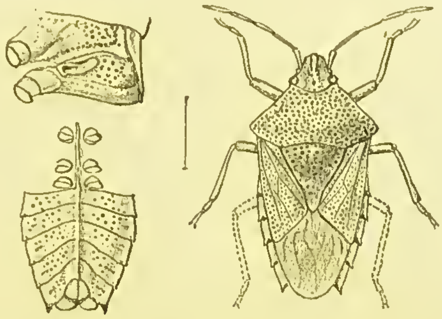

Fig. 201.—*Elasmostethus punctatum.*

and with a very distinct median longitudinal ridge; sternum thickly and strongly punctured, especially on the lateral areas; legs and antennæ ochraceous, the last with the two apical joints brown.

Length 9 to 9½ millim.

Hab. North India (*Brit. Mus.*). Punjab (*Coll. Dist.*).

535. **Elasmostethus nilgirense,** *Dist. A. M. N. H.* (7). vi, p. 231 (1900).

Ochraceous; basal areas of pronotum and scutellum, claval and apical marginal areas of corium, castaneous or reddish-castaneous; pronotal angles, a basal submarginal line to corium, and apical angles of corium black; membrane hyaline, fuscous at base and apex; abdomen above reddish, with the apical area black; lateral margins of the pronotum, a small spot in each basal angle of the scutellum, and a faint longitudinal central line traversing the pronotum and scutellum, levigate, pale ochraceous; antennæ brownish-ochraceous, second joint distinctly longer than the third, apical joint somewhat infuscated; pronotum, scutellum, and corium coarsely and sparingly punctate, the central marginal area of corium much less punctate: body beneath and legs pale luteous; the odoriferous apertures and two small subapical abdominal spots black; apex of abdomen reddish.

Length 9; breadth between pronotal angles 4½ millim.

Hab. Nilgiri Hills (*Hampson*).

536. **Elasmostethus nebulosum,** *Dist. A. M. N. H.* (7) vi, p. 231 (1900).

Ochraceous, with coarse brown punctures; basal spot to head, two anterior marginal spots to pronotum, and marginal spots to

connexivum black; pronotum with brownish suffusions, principally on posterior area and at lateral angles; scutellum much suffused with dark brownish at base, at disk, and at each apical margin, and with a small pale levigate spot in each basal angle; corium with a transverse central and a broad apical brown suffusion; abdomen above reddish-brown, with the extreme apex piceous; antennæ with the two basal joints ochraceous, the remaining joints fuscous, second joint subequal to the third or slightly shorter: body beneath and legs ochraceous; prosternum and femora darkly punctate; sternal spots near coxæ, stigmatal spots, and outer marginal spots at segmental incisures black.

Length 10; breadth between pronotal angles $5\frac{1}{2}$ millim.

Hab. Nága Hills (*Doherty*).

537. **Elasmostethus lewisi**, *Dist. A. M. N. H.* (7) vi, p. 232 (1900).

Ochraceous; pronotum, scutellum, and corium coarsely and darkly punctate; scutellum with a central cordate, levigate spot surrounded by castaneous shading, in which is a short central dark lineate spot above and beneath; extreme apices of pronotal angles, apical margins or only angles of corium, a small spot at base of membrane, and the apical abdominal segmental angles black; abdomen above reddish, with its lateral margins ochraceous; membrane hyaline, slightly brownish on inner and outer margins; antennæ ochraceous, second joint distinctly longer than the third, apical joint somewhat infuscated; head transversely wrinkled; pronotum with two transverse levigate callosities on anterior area; corium with the whole marginal area very finely and concolorously punctate.

Length 8; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Nilgiri Hills (*Brit. Mus.*). Ceylon (*Lewis*).

B. *Lateral angles of pronotum spinously produced.*

538. **Elasmostethus recurvum**, *Dall.* (Acanthosoma) *List Hem.* i, p. 310 (1851); *Stål* (Clinocoris), *En. Hem.* v, p. 114 (1876); *Leth. & Sev. Cat. Gén. Hém.* t. i, p. 257 (1893).

Ovate, above pale olivaceous punctured with black; head thickly and finely punctured with black; central lobe longer than the lateral lobes; pronotum thickly and strongly punctured with black, the lateral angles produced into strong, acute, slightly recurved, deep red spines, the disk with a broad, transverse, yellowish-white fascia across the middle; membrane transparent, brownish; connexivum ochraceous, with a black spot at the posterior angle of each segment: body beneath fulvous, punctured with black; the abdomen sparingly and finely, the sternum more thickly and coarsely punctate; abdominal ridge well marked and impunctate, but not very prominent; legs ochraceous, with the claws black;

rostrum testaceous, with the apex black ; antennæ testaceous, with the apical half of the fifth joint black.

Length $10\frac{1}{2}$ millim.

Hab. North India (*Brit. Mus.*).

539. **Elasmostethus scutellatum,** *Dist.* (Clinocoris) *Tr. E. S.* 1887, p. 355.

Body above ochraceous, thickly and coarsely punctate ; pronotal spines rosy red ; scutellum with a blackish central longitudinal fascia extending from about base to centre ; antennæ ochraceous ; pronotum with the lateral angles straightly produced into subacute spines, the apices of which are slightly reflexed backward and their posterior margins somewhat sinuated ; membrane pale hyaline, with reflections of the red upper surface of the abdomen : body beneath and legs ochraceous ; sternum coarsely punctate.

Length 8 ; breadth between pronotal angles 6 millim.

Hab. Nága Hills (*Chennell*).

540. **Elasmostethus truncatulum,** *Walk.* (Acanthosoma) *Cat. Het.* ii, p. 396. 18 (1867) ; *Dist. A. M. N. H.* (7) vi, p. 230 (1900).
Clinocoris cruciger, *Reut. Berl. ent. Zeitschr.* xxv, p. 80 (1881).

Reddish-ochraceous ; head with some fine punctures, and with two posteriorly converging luteous fasciæ ; antennæ luteous, second and third joints subequal in length ; pronotum with the anterior and anterior-lateral margins, an arcuate line behind the apical margin, a central longitudinal fascia crossed cruciformly by a transverse line near middle, luteous, levigate, the lateral angles spinously produced and slightly recurved ; membrane hyaline, with an irregular broad pale fuscous fascia ; connexivum with luteous spots : body beneath with the lateral and segmental margins of sternum, the abdominal margins (sometimes broken), a lateral row of spots on each side, the mesosternal ridge and ventral spine, pale luteous ; rostrum not extending beyond the posterior coxæ ; lateral margins of the pronotum distinctly sinuated ; exterior margin of corium beyond middle roundly amplified towards apex.

Length $6\frac{1}{2}$ to 7 ; breadth between pronotal angles $6\frac{1}{2}$ millim.

Hab. Darjeeling (*Reuter*) : Assam ; Sibságar (*Coll. Dist.*).

Walker's description of this species is particularly insufficient.

541. **Elasmostethus lineatum,** *Dall.* (Acanthosoma-Sastragala) *Tr. E. S.* v, p. 194 (1849) : *Atkins.* (Sastragala) *J. A. S. B.* lviii, p. 28 (1889); *Dist. A. M. N. H.* (7) vi, p. 230 (1900).
Acanthosoma binotata *Walk. Cat. Het.* ii, p. 395. 16 (1867).
Clinocoris maculata, *Dist. Tr. E. S.* 1887, p. 355.

Above dusky testaceous, strongly punctured with brown ; head yellow, with a brown line on each side of the central lobe, and a row of brown punctures on each side of the lateral lobes ; pronotum with the lateral spines acute, slightly recurved, pitchy brown, a

transverse fascia near the anterior margin, and a narrow longitudinal line along the middle, impunctate, yellow; scutellum yellowish-brown, paler towards the apex, and with a yellow spot in the middle of the base; corium dusky testaceous, thickly and strongly punctured, the apex yellowish; a short transverse impunctate orange fascia near the outer margin, considerably beyond the middle, directed towards but not reaching the internal angle; membrane transparent, faintly clouded with brown; abdomen above deep red, the margins yellowish; head, pronotum, and abdomen beneath, with the legs, rostrum, and antennæ testaceous, the antennæ rather darker; abdominal spine short, scarcely reaching the intermediate coxæ.

Length 7 millim.

Hab. Sikhim. North-east India (*Coll. Dist.*).

542. **Elasmostethus asperum,** *Walk.* (Acanthosoma) *Cat. Het.* ii, p. 395. 17 (1867); *Dist. A. M. N. H.* (7) vi, p. 230 (1867).

Ochraceous, sparingly but coarsely darkly punctate; pronotum with the basal area darker from between the posterior halves of lateral angles, where there is sometimes a distinct dark fascia, two transverse, impunctate, testaceous fasciæ near the anterior margin: body beneath and legs ochraceous, body coarsely and darkly punctate; lateral margins of the sternum levigate, luteous; lateral spines castaneous beneath; the lateral margins of the pronotum are obliquely extended to the apices of the lateral angles, which are obtusely angulated and slightly recurved backward, their posterior margins a little sinuate; corium distinctly ampliated from beyond middle to apex.

Length $9\frac{1}{2}$ to 10; breadth between pronotal angles 6 millim.

Hab. Punjab; Murree (*Stoliczka*). Sikhim (*Coll. Dist.*).

Family COREIDÆ.

This family, though of considerable extent, is much smaller than the Pentatomidæ, and, according to a rough estimate of the known species from all parts of the world, is only about half its size. The Coreidæ have a very distinct facies from the Pentatomidæ, and closely resemble both in form and position the Longicornia amongst the Coleoptera. As a rule they are dull-coloured insects, but many genera exhibit extraordinary dilatations of the antennæ and tibiæ; of the present uses of this dilatation, if any, we are without knowledge.

The family was for a long time known under the term Supericornia, which was an adaptation made by Dallas of the name Supericornes of Amyot and Serville.

Modern writers are practically unanimous in using the term Coreidæ as proposed by Westwood in 1839. The principal structural characters of the Coreidæ are as follows:—

Head neither clypeated nor transversely impressed before the eyes; the antennæ four-jointed, inserted on the upperside of the head, above a line drawn from the eyes to the base of the rostrum; ocelli present; rostrum of four joints. Scutellum small, not reaching the middle of the body nor the base of the membrane.

Considerable difference of opinion has been exhibited by different writers in the classification of this family. This has occurred with Stål himself, whose matured views as given in 1873 are here followed. Four subfamilies are recognized, which are capable of divisional arrangement as in the Pentatomidæ, though these divisions have been raised to the rank of subfamilies by Lethierry and Severin in their 'Catalogue Général des Hémiptères'—a course we are unable to follow.

Synopsis of Subfamilies.

A. Odoriferous orifices distinct, rarely* obsolete or indistinguishable; dorsal surface of fourth and fifth abdominal segments at bases medially sinuate.

a. Bucculæ generally long and extending to near insertion of antennæ; pronotum posteriorly usually three times or more than twice the breadth of head; dorsal surface of first abdominal segment posteriorly truncated; scutellum reaching or passing base of metanotum, generally broader than head between eyes.

* In *Euthetus*.

a. Head near central lobe distinctly and longitudinally impressed; dorsal surface of sixth abdominal segment in male with posterior angles rounded, obtuse, or straight, rarely * acute or somewhat prominently recurved; tibiæ above generally sulcated or dilated .... *Coreinæ.*

b. Head near central lobe not impressed; dorsal surface of sixth abdominal segment in both sexes with posterior angles prominently recurved, slightly dentate, or spinose; tibiæ rounded, not sulcated. *Pseudophlœinæ.*

b. Bucculæ small, short, placed before insertion of antennæ; pronotum posteriorly not or slightly broader than breadth of head, rarely nearly twice, and very rarely † more than twice as broad; dorsal surface of first abdominal segment posteriorly rounded, sometimes strongly produced; scutellum frequently not reaching base of metanotum, somewhat narrower than head between eyes .... *Alydinæ.*

B. Odoriferous orifices sometimes indistinguishable; dorsal surface of fourth abdominal segment at base and apex more or less medially sinuate .... *Corizinæ.*

Subfamily I. COREINÆ.

Coreina, *Stål, Öfv. Vet.-Ak. Förh.* 1872, No. 6, p. 49.

This subfamily, being sufficiently diagnosed in the preceding "Synopsis of Subfamilies," needs no further description here.

The Coreinæ are universally distributed, the tropical genera containing the largest and handsomest species. The brightest coloured species are found in the Neotropical Region, but do not exceed in size some of those belonging to the fauna of British India.

Division *MICTARIA.*

This division, as defined by Stål in 1873, was previously (1867) regarded by him as a subfamily, and again similarly treated by Lethierry and Severin (1894). The same remark will apply to the other divisions of the Coreinæ.

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* In *Cloresmus* and *Cletomorpha*. In the *Phyllomorpharia* the sixth segment is entirely foliaceously dilated, backwardly produced, lobate.

† In *Stenocephalaria*.

The *Mictaria* have the anterior femora beneath near the apex generally distinctly and acutely spined, or armed with two spines, or unarmed or obsoletely shortly spined; intermediate femora in the males rarely distinctly spined; posterior femora spinose, generally incrassated and in the males profoundly thickened.

Synopsis of Genera.

A. Lateral angles of pronotum strongly dilated and produced anteriorly before apex of head .... DEREPTERYX, p. 333.
B. Lateral pronotal angles not produced before apex of head.
- a. Posterior femora in both sexes tuberculate on inner margins, tubercles small and irregular.
  - *a*. Femora above with a small lobate process near apex .... HELCOMERIA, p. 335.
  - *b*. Femora above without a lobate process near apex.
    - a^1. First joint of antennæ not longer than fourth; posterior tibiæ in male spined and dilated.............. PRIONOLOMIA, p. 336.
    - b^1. First joint of antennæ longer than fourth; posterior tibiæ in male neither spined nor prominently dilated .... ELASMOMIA, p. 339.
- b. Posterior femora granulate on inner margins, but not tuberculate.
  - *a*. Posterior tibiæ on both sides moderately dilated.
    - a^1. Abdomen in male strongly tuberculate.
      - a^2. Membrane shorter than abdomen, abdominal apex truncate ...... AURELIANUS, p. 340.
      - b^2. Membrane reaching apex of abdomen, which is rounded ...... MYGDONIA, p. 340.
    - b^1. Abdomen not tuberculate in either sex .... OCHROCHIRA, p. 341.
  - *b*. Posterior tibiæ not dilated above.
    - a^3. Posterior tibiæ dentate on inner margins in male................ MICTIS, p. 344.
    - b^3. Posterior tibiæ not dentate in either sex .... ANOPLOCNEMIS, p. 346.

Genus DEREPTERYX.

Derepteryx, *White, Charlesworth's Mag. Nat. Hist.* (2) iii, p. 542 (1839); *id. Tr. E. S.* iii, p. 92 (1842).
Derapteryx, *Westw. in Hope Cat.* ii, p. 8 (1842).
Subg. Pterygomia, *Stål, En. Hem.* iii, p. 40 (1873).

Type, *D. grayi*, White.

Distribution. N.E. India, Burma, China, Borneo.

Lateral angles of the pronotum produced into broad lunately curved processes extending beyond the apex of the head, these

processes are toothed on the inner side and acute at apices; posterior femora in the male incrassated and inwardly spinous or tuberculate, the posterior tibiæ in the same sex inwardly toothed before apex; abdomen unarmed; third joint of the antennæ not (or very slightly) compressed, not dilated.

543. **Derepteryx grayi**, *White, Charlesworth's Mag. Nat. Hist.* (2) iii, p. 542 (1839); *id. Tr. E. S.* iii, p. 92, pl. vii, f. 4 (1842).

Greyish-brown or brownish-ochraceous; apical joint of the antennæ ochraceous, much more slender than the preceding joints, which are finely hirsute; pronotum above with small scattered tubercles, the lateral processes angulated and strongly toothed on their inner margins, the outer margin a little sinuate and finely serrate; scutellum and corium densely and finely pilose, membrane somewhat shining; posterior femora in the male incrassated and

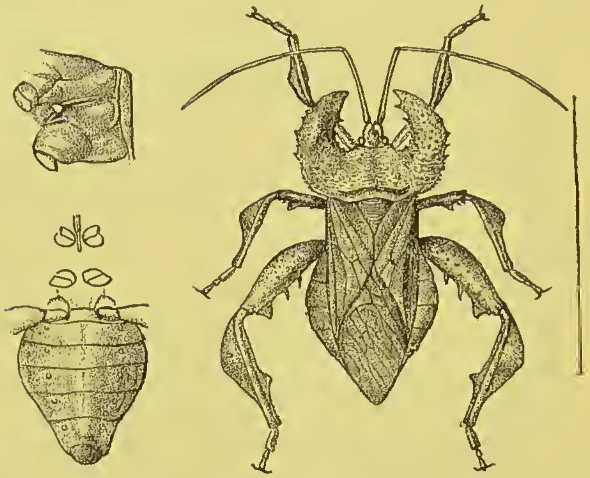

Fig. 202.—*Derepteryx grayi*, ♀.

strongly spinous on the inner margins, in the female elongate and slender, not spined on inner margins; all the femora in both sexes with an angular dilatation beneath before apex, the dilated margins more or less serrate; tibiæ outwardly dilated in both sexes, the posterior most prominently and the anterior most moderately.

Length 33; breadth between pronotal angles 19 millim.

Hab. North Bengal (*Boys*). Sikhim; Kurseong (*Lethierry*). Nepal (*Hardwicke, Brit. Mus.*). Burma; Ruby Mines (*Doherty*).

544. **Derepteryx hardwicki**, *White, Charlesworth's Mag. Nat. Hist.* (2) iii, p. 542 (1839); *id. Tr. E. S.* iii, p. 93 (1842).
Mictis amplectens, *Walk. Cat. Het.* iv, p. 25 (1871).

Brownish-ochraceous; antennæ with the apical joint ochraceous, about equal in substance to the second and third joints, which with

the first are very finely hirsute; pronotum above rugose, not tuberculate, the margins of the lateral processes more strongly spined than in the preceding species; scutellum and corium finely pilose; posterior femora in the male less incrassated than in *D. grayi*, spined on inner margins and with a series of tubercles above, in female slender and not spined on inner margin, all the femora in both sexes angulate beneath near apices; tibiæ not prominently dilated as in *D. grayi*.

Length 26 to 28; breadth between pronotal angles 15 to 16 millim.

Hab. Nepal (*Hardwicke*, *Brit. Mus.*). Sikhim (*Ind. Mus.*); Kurseong (*Lethierry*). Assam; Margherita (*Ind. Mus.*); Khási Hills (*Chennell*). Burma; Ruby Mines (*Doherty*), Karennee (*Fea*).

545. **Derepteryx feana**, sp. n.

Piceous, ochraceously pilose, membrane shining, cupreous; antennæ with the first, second, and third joints finely hirsute, the fourth joint a little paler and pilose; pronotum granulate and rugulose, with a distinct central black carinate line, the lateral processes just passing the apex of the head, their apices broad, obliquely truncate, their margins irregularly serrate, posterior margins more strongly serrate; abdomen above red, connexivum piceous; sternum beneath with an ochraceous spot near the odoriferous apertures; posterior femora distinctly blackly tuberculate in both sexes; posterior tibiæ dilated on both sides, in the male angulate on inner margins.

Length 31 to 33; breadth between pronotal angles, ♂ 16, ♀ 19 millim.

Hab. Tenasserim; Thagata (*Fea*).

A species to be recognized by the broadly oblique apices of the pronotal processes, and by the elongate body.

Genus **HELCOMERIA.**

Helcomeria, *Stål, En. Hem.* iii, p. 40 (1873).

Type, *H. spinosa*, Sign.

Distribution. Eastern Himalayas and Assam.

Differs from the preceding genus (*Derepteryx*) by having the lateral processes of the pronotum more or less horizontally produced and not extending beyond the apex of the head; the posterior femora in both sexes are somewhat strongly tuberculate, in the male strongly spined beneath before apex; tibiæ dilated in both sexes, in the male denticulated on inner margins; the femora above have on each side near apex a small lobate process; apex of scutellum tuberculate; antennæ with the basal joint longest; abdomen unarmed.

546. **Helcomeria spinosa**, *Sign.* (Petascelis) *Ann. Soc. Ent. Fr.* 1851, p. 123, pl. iv, f. 4.

Greyish-brown or brownish-ochraceous; antennæ hirsute, apical joint slender, pilose; anterior margins of the pronotum strongly

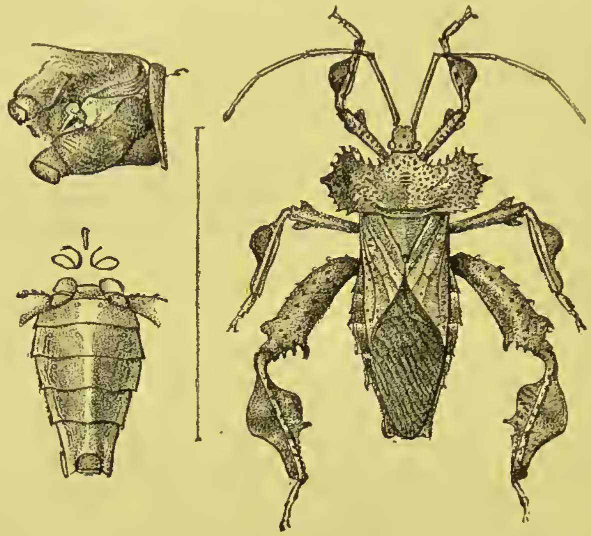

Fig. 203.—*Helcomeria spinosa*, ♀.

spined, lateral margins of the dilated processes less strongly and more irregularly spinous, upper pronotal surface finely tuberculate, rugose, and centrally prominently wrinkled on disk; scutellum pilose, with an apical recurved black tubercle; corium pilose; membrane cupreous, somewhat irregularly ochraceously pilose; connexivum cupreous, ochraceously pilose, particularly at the bases of the segments; posterior femora strongly tuberculate in both sexes, in the male strongly spined beneath before apex; posterior tibiæ dilated on both sides, inwardly spined in male, intermediate and anterior tibiæ only outwardly dilated.

Length 34 to 38; breadth between pronotal angles 19 to 19½ millim.

Hab. Sikhim (*Ind. Mus.*); Assam; Margherita (*Doherty*); Nága Hills (*Ind. Mus.*); Khási Hills (*Chennell*).

Genus PRIONOLOMIA.

Prionolomia, *Stål, En. Hem.* iii, p. 37 (1873).

Type, *P. malaya*, Stål, a Malaccan species.

Distribution. N.E. India, Burma; Malay Peninsula, Malayan Archipelago.

From *Helcomeria* this genus may be distinguished by the absence of the lobate process to the subapical upper surface of the femora.

and by the non-tuberculate apex of the scutellum; the first joint of the antennæ is not longer than the fourth; the posterior tibiæ are moderately dilated and in the male denticulate on the inner side; posterior femora in the male with a strong spine before apex, and above longitudinally tuberculate; abdomen unarmed.

547. **Prionolomia gigas**, *Dist. A. M. N. H.* (5) iii, p. 128 (1879); *Bredd. Deutsch. ent. Zeitschr.* 1900, p. 169.

Castaneous; head, pronotum, scutellum, and corium more or less greyishly pilose; antennæ pale castaneous, second and third joints

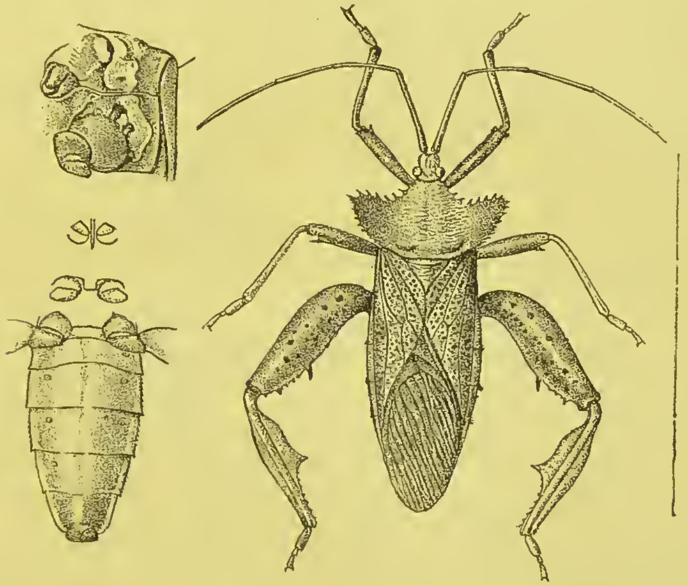

Fig. 204.—*Prionolomia gigas*, ♂.

a little darker at apices, third and fourth joints with their basal areas pale ochraceous; pronotum rugose, obscurely granulate, lateral angles very prominent, produced somewhat upward and forward, gradually narrowed to apex, with the margins strongly serrate, a transverse impression a little before anterior margin, and a similar impression with a small tubercle at each end near posterior margin; scutellum with extreme apex luteous; corium obscurely blackly granulate; membrane brassy-brown; sternum with an oblique whitish or luteous fascia on each lateral area; posterior femora above with black tubercles, in the male prominently spined beneath near apex; posterior tibiæ prominently dilated on both sides, in the male strongly angulate beyond middle on the inner side, in the female rounded, entire.

Length 43; breadth between pronotal angles 19 millim.

Hab. Khási Hills (*Chennell*). Burma; Karennee (*Fea*; *Doherty*).

548. **Prionolomia heros,** *Fabr.* (Lygæus) *Ent. Syst.* iv, p. 136 (1794); *Stål* (Mictis), *Hem. Fabr.* i, p. 44. 4 (1868).
Mictis hystrix, *Costa, Rend. Ac. Nap.* ii, p. 253 (1863).

Pale brownish-ochraceous, finely and thickly punctate; sternum with an oblique pale ochraceous fascia on each lateral area; antennæ with the apices of the joints a little darker, fourth joint luteous near base; connexivum with the apices of the segmental incisures luteous; pronotal angles moderately dilated and marginally dentate. In the male the posterior femora are somewhat strongly incrassated, straight, convex above, on each side with a series of spines, and beneath irregularly spinose, all the spines black, beneath with one prominent spine.

Length 33; breadth $9\frac{1}{2}$ millim.

Hab. Sylhet (*vide Stål*).—Java (*Stockholm Mus.*).

I do not accurately know this species, though I possess a specimen from Bantam in Java, which agrees fairly well with the description. It seems to be a rare species in British India.

549. **Prionolomia fulvicornis,** *Fabr.* (Cimex) *Mant.* ii, p. 288 (1787); *id.* (Lygæus) *Syst. Rhyng.* p. 204 (1803); *Stål, Hem. Fabr.* i, p. 45 (1868).

Pronotum, scutellum, and membrane piceous-brown; head and corium brownish-ochraceous, sometimes uniformly; antennæ and legs pale castaneous: in the male the posterior legs are piceous with the tarsi castaneous; body beneath in female obscure castaneous, in male with the sternum piceous, the sternal segmental margins and the abdomen castaneous; the pronotum has the anterior area granulate, the lateral angles somewhat strongly horizontally produced, their apices narrowed and obtusely pointed, their margins and the anterior lateral margins strongly serrate; posterior femora in the male strongly incrassated, tuberculate on each side; posterior tibiæ in male prominently inwardly angulated, in female obtusely widened, not angulated; a small ochraceous spot near the odoriferous orifices.

Length 26 to 29; breadth between pronotal angles 12 to $13\frac{1}{2}$ millim.

Hab. Khási Hills (*Chennell*).

550. **Prionolomia cardoni,** *Lethierry, Bull. Soc. Ent. Belg.* 1891, p. cxliii.

This species, which I have not seen, was described from a single male example. It is stated to differ from *P. fulvicornis* by its deeper colour, the lateral expansion of the pronotum more rounded or enlarged, the dentation more acute, the granules on the femora smaller and more numerous, and by the angles on the inner margin of the tibiæ being nearer the base and more obtuse.

Length 25 millim.

Hab. Bengal; Kunbir (*vide Lethierry*).

Genus ELASMOMIA.

Elasmomia, *Stål, En. Hem.* iii, p. 38 (1873).

Type, *E. granulipes*, Westw.
Distribution. Eastern Himalayas and Sylhet.

Allied to *Prionolomia*, but with the first joint of the antennæ longer than the fourth; posterior tibiæ in the male neither ampliated nor dentated; posterior femora in male armed on the inner side with a somewhat long spine.

551. **Elasmomia granulipes**, *Westw.* (Myctis) *in Hope Cat.* ii, p. 11 (1842); *Stål, En. Hem.* iii, p. 41 (1873).

Ferruginous; apical joint of antennæ, excluding extreme base, ochraceous; pronotum with the lateral margins moderately reflexed

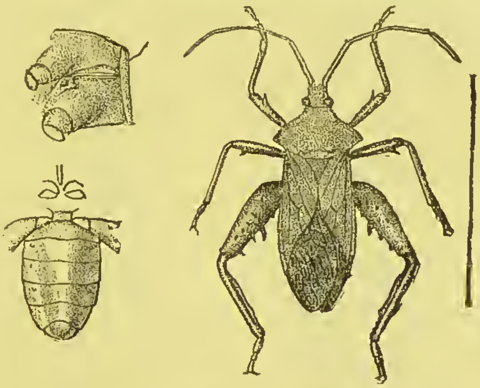

Fig. 205.—*Elasmomia granulipes*, ♂.

and serrate, the lateral angles horizontally produced with their apices subacute: body above obscurely pilose; central incision on anterior area of head very distinct; femora in male incrassated, sparsely tuberculate inside, somewhat prominently spined before apex; in the female these femora are much less developed; posterior tibiæ moderately ampliated, but neither dilated nor angulate.

Length 21 to 25; breadth between pronotal angles 8 to 10 millim.
Hab. Sikhim (*Coll. Dist. & Ind. Mus.*).

552. **Elasmomia ? serrata**, *Sign. Ann. Soc. Ent. Fr.* 1882, p. lxiv.

I have not seen this species. It is described as differing from *E. granulipes* by the pronotum being toothed ("denteleé"), by the absence of granulations to the posterior femora, and by the presence, in the male, of a triangular dentation on the inner side of the posterior tibiæ at about one-third from base.

Length 22; breadth between pronotal angles $9\frac{1}{2}$ millim.
Hab. Sylhet (*Signoret Coll., Vienna Mus.*).

From the structure of the posterior tibiæ, as above detailed, this species seems scarcely to belong to the genus *Elasmomia*.

Genus AURELIANUS, nov.

Type, *A. elongatus*, Dist.

Distribution. Burma.

Elongate; membrane not reaching apex of abdomen, which has its apex truncate; anterior tibiæ somewhat distinctly dilated, considerably narrower at base than apex; antennæ with the first and fourth joints subequal in length, fourth longer than third; rostrum with the second and fourth joints subequal in length; head distinctly cleft at apex between the lateral lobes; pronotum elongate, lateral margins serrate, lateral angles not prominent; posterior femora in male strongly incrassate, much curved at base, strongly serrate on inner and outer margins; posterior tibiæ in male moderately amplified on each side, on the inner side somewhat prominently bidentately sinuate, the apex with a small tubercle on each side. Abdomen beneath in male with a central broad, flat, rounded tubercle at the junction of the second and third segments, and with a strong conical tubercle on each lateral area of the second segment; apical angles of the sixth segment obsoletely lobate.

553. **Aurelianus elongatus**, sp. n.

Dark cinnamomeous; antennæ, eyes, and membrane piceous; antennæ with the first joint, excluding apex, and the fourth joint cinnamomeous, apex of fourth joint luteous; head, pronotum, scutellum, corium, and the posterior femora moderately ochraceously pilose; abdominal tubercles and posterior tibiæ beneath piceous.

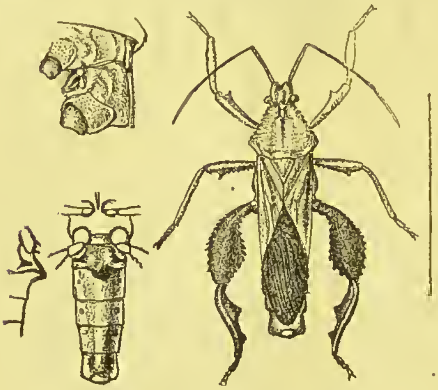

Fig. 206.—*Aurelianus elongatus.*

Length 24; breadth between pronotal angles $6\frac{1}{2}$ millim.

Hab. Burma; Bhamo (*Fea*).

This species is founded on two male examples; I have not seen a female specimen.

Genus MYGDONIA.

Mygdonia, *Stål* (part.), *Hem. Afr.* ii, pp. 2 & 16 (1865); *id. En. Hem.* iii, p. 39 (1873).

Type, *M. tuberculosa*, Sign., an African species.

Distribution. Ethiopian Region and British India.

Head subquadrate, antenniferous tubercles subcontiguous; rostrum very short; corium with the apical margin moderately sinuated, its apical angle moderately produced; posterior legs

placed far apart; anterior femora beneath near apex bidentate, the apical tooth sometimes obsolete; posterior femora in the male incrassated; anterior and intermediate tibiæ simple, posterior tibiæ on each side dilated. In the male the junction of the second and third abdominal segments is centrally slightly tuberculate, and the junction of the third and fourth segments is strongly and tuberculously elevated.

554. **Mygdonia amplicollis**, *Stål, En. Hem.* iii, p. 43 (1873).

Blackish-brown, obscurely ochraceously pilose; membrane very dark cupreous; apical joint of the antennæ and the tarsi ochraceous; first joint of antennæ subequal in length to the fourth, first, second, and third joints moderately stout and finely hirsute, fourth joint more slender, pilose; pronotum with the lateral angles somewhat strongly developed, narrowed apically to a small point, the anterior lateral margins strongly and coarsely dentate, the

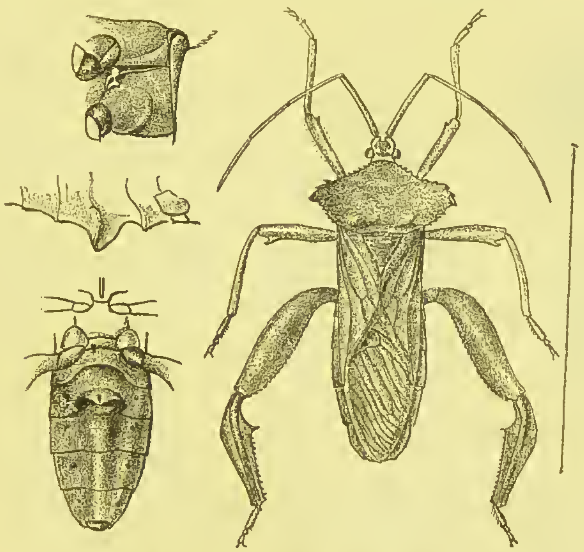

Fig. 207.—*Mygdonia amplicollis.*

posterior lateral margins more finely and closely dentate; femora in the male incrassate, inwardly granulate, in the female more slender; posterior tibiæ dilated on each side, in the male inwardly angulate near base. Abdomen beneath in male finely centrally tuberculate at the junction of the second and third, and strongly, robustly, transversely tuberculate at the junction of the third and fourth abdominal segments; in the female the abdomen is broader and unarmed.

Length 34 to 36; breadth between pronotal angles 16 to 16½ millim.

Hab. Cachar (*Wood-Mason*); Nága Hills (*Doherty*).

Genus OCHROCHIRA.

Ochrochira, *Stål, En. Hem.* iii, p. 39 (1873); *Dist. A. M. N. H.* (6) xii, p. 121 (1893).

Type, *O. albiditarsis*, Westw.

Distribution. Himalayas, Assam, Burma, Borneo, China, and Japan.

Differs from *Mygdonia* by the non-tuberculate abdomen in the male; the posterior tibiæ are less dilated; the fourth joint of the antennæ is longer than the third; the lateral angles of the pronotum moderately dilated.

555. **Ochrochira albiditarsis**, *Westw.* (Myctis) *in Hope Cat.* ii, p. 11 (1842); *Stål, En. Hem.* iii, p. 44 (1873).

Ferruginous, finely greyishly pilose; antennæ, legs, and membrane dark cupreous; apical joint of antennæ, anterior and intermediate tibiæ, and the tarsi ochraceous; antennæ with the first, second, and third joints finely hirsute, the fourth more slender and pilose; pronotum with the lateral margins strongly and coarsely dentate, the lateral angles prominently produced; posterior femora in male incrassated, with a prominent spine beneath near centre, the apex of which is ochraceous, and with a small apical cluster of short spines or teeth; posterior tibiæ in male moderately dilated on both sides, inwardly angulated near base; sternum with an obscure oblique ochraceous fascia.

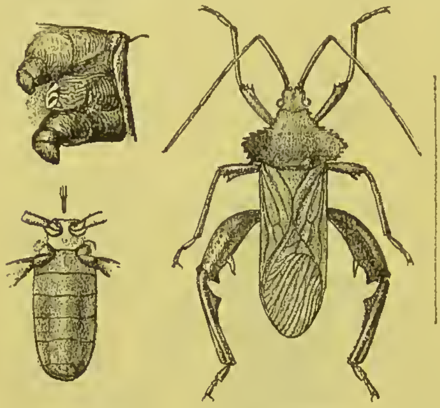

Fig. 208.—*Ochrochira albiditarsis*, ♂.

Length 23; breadth between pronotal angles 8 millim.

Hab. Simla (*Coll. Dist.*). Sylhet (*Stockholm Mus.*).

556. **Ochrochira aberrans**, *Dist.* (Prionolomia) *Ent. Month. Mag.* xxv, p. 230 (1889); *id. A. M. N. H.* (6) xii, p. 121 (1893).

Male. Dark brownish; antennæ (apical joint mutilated in type), membrane, and legs dark fuscous; all the tarsi and the anterior and intermediate tibiæ dark ochraceous: body beneath chocolate-brown; antennæ with the basal joint longer than the second, which is also longer than the third; pronotum with the lateral margins finely and obtusely serrated, the lateral angles angularly produced and slightly directed upward, the base transversely channelled; scutellum very prominently and coarsely wrinkled at

base ; posterior femora robust, globose, and with a very strong and prominent spine before apex, and a small obtuse tooth and some very small spines at apex ; posterior tibiæ flattened, finely serrated inwardly, and with a prominent tooth near base.

Female. Paler in hue, legs concolorous with body.

Length, ♂ & ♀ 37 ; breadth between pronotal angles 14 to 15 millim.

Hab. Sikhim (*Coll. Dist.*). Assam (*Coll. Atkinson*).

557. **Ochrochira palliditarsis**, *Stål, En. Hem.* iii, p. 44 (1873).

This species I have not seen. It is described from a female specimen only, and is evidently closely allied to *O. aberrans*, Dist., but seems to be distinguished from that species by the greater expansion of the pronotal angles.

Length 37 ; breadth between pronotal angles 16½ millim.

Hab. North-east India (*Signoret Coll., Vienna Mus.*).

558. **Ochrochira pallescens**, *Dist.* (Prionolomia) *Ent. Month. Mag.* xxv, p. 230 (1889).

Brownish-ochraceous ; membrane fuscous ; anterior and intermediate tibiæ, all the tarsi, and a somewhat long spine on posterior femora, luteous ; antennæ brownish-ochraceous, the apical joints luteous ; pronotum with the lateral margins and angles strongly serrated, the last broadly and somewhat upwardly produced, much more developed in female than in male, two small distinct nodosities near basal margin ; posterior tibiæ in male inwardly angulated near base and thence finely serrated to apex ; in female a little more dilated, especially at apex.

Length 26 to 27 ; breadth between pronotal angles 11 to 14 millim.

Hab. Assam (*Coll. Dist.*). Cachar (*Wood-Mason, Ind. Mus.*).

559. **Ochrochira biplagiata**, *Walk.* (Mictis) *Cat. Het.* iv, p. 22 (1871) ; *Dist. A. M. N. H.* (6) xii, p. 121 (1893).

Above ochraceous ; antennæ, eyes, lateral dentation to pronotum, transverse striæ to scutellum, membrane, body beneath, and legs fuscous ; apical joint of antennæ and the tarsi pale ochraceous ; pronotum with a somewhat distinct central longitudinal impression, the lateral dentation more obtuse than in *O. pallescens*, and the lateral angles a little less produced ; posterior femora in the male incrassated, inwardly with a few very coarse granulations and a strong spine about one-third before apex, in the female simple ; posterior tibiæ in the male moderately dilated and inwardly angulate near base, in the female simple.

Length 26 to 27 ; breadth between pronotal angles 11 to 12½ millim.

Hab. Nepal. Sikhim (*Coll. Dist.*). Khási Hills (*Chennell*). Burma (*Coll. Dist.*).

560. **Ochrochira nigrorufa**, *Walk.* (Physomerus) *Cat. Het.* iv, p. 60 (1871); *Dist. A. M. N. H.* (6) xii, p. 121 (1893).

Allied to the preceding species (*O. biplagiata*), from which it differs by the much less produced pronotal angles, which have their posterior margins obliquely straight, not dentate; the lateral pronotal dentation less profound; spine to posterior femora in the male slightly longer; in general appearance more resembling a species of the genus *Mictis*.

Length 25 to 28; breadth between pronotal angles 9 to 9½ millim.

Hab. Khási Hills (*Chennell*). Burma; Karennee (*Fea, Doherty*), Ruby Mines (*Doherty*).

This species varies in frequently having the colour above of a dark reddish-ochraceous; the central longitudinal impression to the pronotum sometimes fuscous; while in other examples the disk of the corium is more or less fuscous.

Genus **MICTIS**.

Mictis, *Leach, Zool. Misc.* i, p. 92 (1814); *Amy. & Serv. Hém.* p. 189 (1843).
Myctis, *Westw. in Hope Cat.* ii, p. 10 (1842).
Cerbus, *Hahn, Wanz. Ins.* i, pl. 1, f. 1 (1831); *Burm. Handb.* 2, i, p. 339 (1835).
Subg. Aspilosterna, *Stål, En. Hem.* iii, p. 46 (1873).

Type, *M. profana*, Fabr., an Australasian species.

Distribution. Ethiopian, Oriental, Australasian, and Eastern Palæarctic Regions.

In this genus the posterior tibiæ are not dilated on both sides, and only inwardly dentate in the male; the abdomen beneath is distinctly tuberculate in the male; the pronotum is anteriorly provided with a more or less distinct collar.

561. **Mictis tenebrosa**, *Fabr.* (Cimex) *Mant.* ii, p. 288 (1787); *Dist. P. Z. S.* 1901, i, p. 327.
Cerbus umbilicatus, *Herr.-Sch. Wanz. Ins.* vi, p. 29, pl. 190, f. A (1842); *id. t. e.* p. 51, f. 611.
Myctis fasciatus, *Westw. in Hope Cat.* ii, p. 11 (1842).
Mictis nigricornis, *Dall. List Hem.* ii, p. 400 (1852).
Stoll, Pun. f. 277.

Greyish-brown or brownish-ochraceous; antennæ, legs, and body beneath somewhat darker in hue; abdomen above black, with two large central ochraceous spots sometimes narrowly connected: posterior femora in the male strongly curved and incrassated, in the female much less curved and only moderately thickened; posterior tibiæ in the male inwardly strongly dentate before middle, thence serrated to apex, in the female slender and non-dentate; abdomen beneath in male with the median apex of second abdominal segment produced into a long flat rounded

tubercle, with a small rounded tubercle on the same segment behind each posterior coxa; tarsi pale ferruginous; pronotum with the lateral margins finely serrated, the lateral angles moderately prominently subacutely rounded.

Length 23 to 26; breadth between pronotal angles 8 to 9 millim.

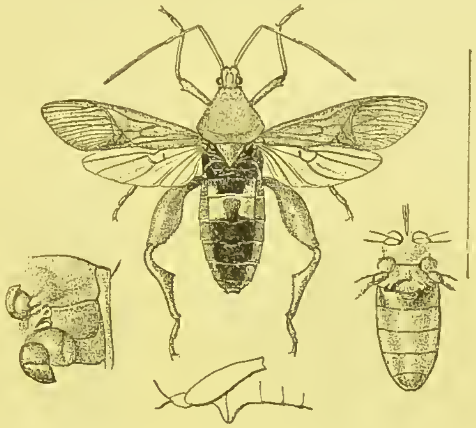

Fig. 209.—*Mictis tenebrosa*, ♂.

Hab. Sikhim. Assam; Margherita (*Ind. Mus.*). Khási Hills (*Chennell*). Sibságar (*Peal*). Burma; Akyab (*Ind. Mus.*), Palon, Bhamo, Karennee (*Fea*); Tavoy (*Ind. Mus.*).—Also found in the Malay Peninsula and China.

562. **Mictis gallina**, *Dall. List Hem.* ii, p. 403 (1852).

Above greyish-brown; antennæ, legs, and body beneath somewhat dark castaneous; membrane piceous; abdomen above black, with two large subbasal ochraceous spots, and a narrow elongate lateral ochraceous spot on each side at the junctions of the fourth and fifth and fifth and sixth segments; body elongate, pronotal lateral angles moderately prominent, their apices subacute and slightly recurved, pronotal lateral margins finely serrate; apex of scutellum ochraceous; posterior femora in male very much incrassated and apically thickened, in female apically incrassated but less prominently so than in male; posterior tibiæ in male dentate inwardly at about one-third from apex, in the female simple; abdomen beneath in male with a strong conical tubercle on each side of basal disk of second segment.

Length 25 to 26; breadth between pronotal angles 9 to 10 millim.

Hab. Burma; Palon (*Fea*), Taoo (*Coll. Dist.*). Tenasserim; Myitta (*Doherty*).

563. **Mictis macra**, *Stål, Ann. Soc. Ent. Fr.* 1865, p. 173.

Closely allied to *M. gallina*, but with the posterior legs more slender, the femora in the male of the same shape but much less thickened, the posterior tibiæ in the male also less broadly dentate; abdominal tubercles beneath in male as in *M. gallina*.

Length 23 to 24; breadth between pronotal angles 8 to 9 millim.

Hab. Sylhet (*Stockholm Mus.*). Mergui (*Ind. Mus.*).—Also found in the Malay Peninsula.

564. **Mictis pictor**, *Fabr.* (Lygæus) *Ent. Syst.* iv, p. 138 (1794); *Stål, Hem. Fabr.* i, p. 44 (1868).

Dull ochraceous, unicolorous; pronotum densely punctate and slightly rugulose; scutellum transversely striate; corium with the veins and scattered speckles piceous; membrane brassy-brown; pronotum with the lateral angles moderately prominent, the lateral margins serrated.

The above description is taken from two female specimens in my own collection, and Stål (*supra*) only describes the same sex. *M. pictor* may be recognized by its great length and breadth and distinct coloration.

Length 30 to 32; breadth between pronotal angles 12 to 14 millim.

Hab. Assam; Margherita (*Doherty*), Khási Hills (*Chennell*).

Genus **ANOPLOCNEMIS**.

Anoplocnemis, *Stål, En. Hem.* iii, p. 47 (1873).
Mictis (Div. 1), *Dall. List Hem.* ii, p. 386 (1852); *Stål* (part.), *Hem. Afr.* ii, p. 27 (1865).

Type, *A. curvipes*, Fabr., an African species.

Distribution. Ethiopian and Oriental Regions.

A genus closely allied to *Mictis*, but at once separated by the structure of the posterior tibiæ, which are in both sexes unarmed; the abdomen beneath in the male is very strongly gibbonsly tuberculate.

565. **Anoplocnemis phasiana**, *Fabr.* (Lygæus) *Spec. Ins.* ii, p. 361 (1781); *Dist. A. M. N. H.* (7) vi, p. 373 (1900); *id. P. Z. S.* 1901, p. 327.
Lygæus grossipes, *Fabr. Syst. Rhyng.* p. 205. 11 (1803).
Cerbus tumidipes, *Herr.-Sch. Wanz. Ins.* vi, p. 54, f. 614 (1842).
Mictis punctum, affinis, bicolor, *Westw. in Hope Cat.* ii, p. 10 (1842).
Mictis dubia, castanea, lata, *Dall. List Hem.* ii, pp. 389 & 390. 13, 14, 15 (1852).
Myctis ferrifera, *Walk. Cat. Het.* iv, p. 24. 57 (1871).
Physomerus mictiformis, *Walk. Cat. Het.* iv, p. 61. 8 (1871).
Stoll, Pun. ff. 68 & 69.

Variable in colour—ochraceous, castaneous, piceous, or piceous with the corium castaneous; abdomen above sanguineous, with the margins and apex piceous; antennæ fuscous or piceous, with the

apical joint ochraceous, more or less shaded with fuscous for a little beyond base; extreme apex of scutellum ochraceous; margins of odoriferous apertures ochraceous; posterior femora in male much curved at base, thence strongly incrassated, inwardly broadly dentate near apex, outer margin linearly serrate, in the female only moderately incrassate inwardly and outwardly finely linearly serrate, moderately acutely dentate near apex. Abdomen beneath in male with the second and third segments gibbous, and lobately tuberculate at their junction; in the female gibbous but not tuberculate, the centre of the posterior margin of the second segment slightly

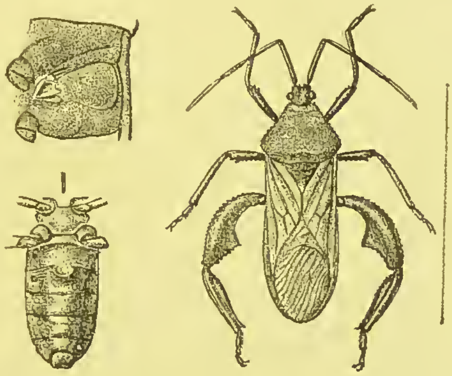

Fig. 210.—*Anoplocnemis phasiana*, ♂.

truncately produced; in both sexes the segmental margins are more or less distinctly ochraceous.

Length 22 to 28; breadth between pronotal angles 7 to 10 millim.

Hab. Sikhim (*Ind. Mus.*). Khási Hills (*Chennell*); Nága Hills (*Butler*); Sibságar (*Ind. Mus.*). Bombay (*Leith*); Bor Ghât (*Dixon*). Malabar (*Coll. Dist.*). Bangalore (*Cameron*). Trivandrum. Ceylon (*Green*). Burma; Palon (*Fea*). Tenasserim; Tavoy (*Ind. Mus.*). Sinkip Isld. (*Ind. Mus.*).—Also found in the Malay Peninsula and many islands of the Malay Archipelago.

In Ceylon this species as recorded by Mr. Green, both in the adult and immature stages, occurs frequently on the young shoots of *Erythrina lithosperma*, puncturing the extremities of the shoots, thus causing them to wilt and wither. On Mr. Green once attempting to closely observe a male feeding, it ejected a jet of fluid backwards to a distance of fully eighteen inches. The jet appeared to proceed "*ab ano*" ('Entomologist,' xxxiv, p. 115). On the Bor Ghât, Mr. Dixon collected specimens on the flowers of *Phaylopsis parviflora* Willd.*

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* Note.—*Mictis protractus*, Herr.-Sch. Wanz. Ins. ix, p. 247 (1853), judging from the description, is a synonym of *Anoplocnemis phasiana*, Fabr.

566. **Anoplocnemis compressa**, *Dall.* (Mictis) *List Hem.* ii, p. 388 (1852).

Body above and beneath cinnamomeous; legs pale castaneous; abdomen above black, its margins and apex brownish, and with two large subbasal ochraceous spots; antennæ castaneous or piceous, the apical joint with a broad subbasal ochraceous annulation; posterior femora in the male much curved at base, and thence strongly incrassated, broadly dentate on inner margin near apex, in the female only moderately incrassate; abdomen beneath in the male with the second and third segments moderately gibbous and at their junction centrally lobately tuberculate, in the female gibbous but not tuberculate.

Length 23; breadth between pronotal angles 7 to 8 millim.

Hab. North India (*Brit. Mus.*). Khási Hills (*Chennell*).

Lygæus phasianus Wolff (nec Fabr.) Icon. ii, p. 72, f. 69 (1801), is apparently a species of *Anoplocnemis*, described as "ex India orientali." I have never seen this species, and its habitat is too vague for its definite insertion in the fauna of British India.

Division *PETASCELARIA.*

In this Division the anterior femora have on the under surface a double series of small spines, or they are spined on each side at apex, or unarmed; the lateral lobes of the head are widely separated at their apices; the posterior coxæ remote from each other; the abdominal spiracles large and transverse; and the posterior femora incrassated.

About eight genera of *Petascelaria* are at present recognized, all of which with one exception (*Petillia*) belong to the Ethiopian Region.

Genus PETILLIA.

Petillia, *Stål, Hem. Afr.* ii, p. 2 (1865); *id. En. Hem.* iii, p. 54 (1873).
Trematocoris, *Mayr, Verh. z.-b. Ges. Wien*, xv, p. 431 (1865).

Type, *P. tragus*, Fabr.

Distribution. Oriental and Ethiopian Regions.

Posterior tibiæ moderately dilated; abdominal spiracles large and transverse; anterior femora beneath with a double series of spines on apical area; head shortly produced in front of eyes, near central lobe with two short longitudinal impressions, lateral lobes widely separated at apices; posterior tibiæ beneath in the male dentately produced.

567. **Petillia tragus**, *Fabr.* (Cimex) *Mant.* ii, p. 288 (1787); *Wolff* (Lygæus), *Icon.* v, p. 194, f. 188 (1811); *Herr.-Schäff.* (Cerbus) *Wanz. Ins.* vi, p. 73, f. 641 (1842).
Stoll, Pun. f. 276.

Brownish-ochraceous; pronotum with scattered tuberculous

black spots on disk, and two transverse black spots on anterior area, the lateral angles strongly anteriorly produced, somewhat lunate, their apices subacute and extending just beyond a line drawn across the apex of the head, anterior lateral margins obtusely blackly dentate, posterior lateral margins of produced angles distinctly serrate; outer claval margin, posterior and anterior lateral margins, and veins of corium luteous; membrane cupreous: body beneath ochraceous, with numerous black tuberculous spots; margins of the transverse abdominal spiracles black; posterior tibiæ inwardly obtusely angulate, with an obscure luteous spot near base.

Length 26 to 28; breadth between apices of pronotal angles $11\frac{1}{2}$ millim.

Hab. North-east Bengal (*Coll. Dist.*).—China.

This is a species generally received from China, but of which a female specimen from N.E. Bengal is in my own collection. It may be distinguished from the other species of the genus here enumerated by the strongly anteriorly produced pronotal angles.

568. **Petillia lobipes**, *Westw.* (Myctis) *in Hope Cat.* ii, p. 11 (1842).

Above and legs pale brownish, moderately ochraceously pilose; body beneath ochraceous; pronotum with scattered black tuberculous spots on disk and two obscure transverse black spots on anterior area, lateral angles somewhat broadly upwardly and horizontally produced, their apices subacute and slightly directed backwards, the anterior lateral margins and the margins of the produced angles distinctly darkly serrate; a central fascia to head and a short basal lateral stripe to corium luteous; veins of corium piceous; membrane bronzy-brown; posterior femora in the male strongly incrassated, with small scattered dark tubercles and with a few small spines beneath; posterior tibiæ dentately dilated near base and thence shortly spinous to apex, the dentate dilatation black with an ochraceous spot near base: body beneath with scattered small dark tuberculous spots, the surrounding areas of the intermediate and posterior coxæ somewhat broadly piceous; antennæ fuscous.

Length 26 to 28; breadth between pronotal angles $11\frac{1}{2}$ millim.

Hab. Karáchi (*Ind. Mus.*). Bombay (*Leith*).—Also recorded from Java and China.

569. **Petillia notatipes**, *Walk.* (Trematocoris) *Cat. Het.* iv, p. 34 (1871).

Closely allied to *P. lobipes*, but differing by the shorter and less produced pronotal angles in both sexes.

Length 22; breadth between pronotal angles $9\frac{1}{2}$ millim.

Hab. Calcutta (*Coll. Dist.*).

570. **Petillia patulicollis**, *Walk.* (Trematocoris) *Cat. Het.* iv, p. 37 (1871).

Pale brownish or brownish-ochraceous, moderately ochraceously pilose; pronotum finely darkly crenulate, the lateral angles broadly and somewhat convexly produced, their margins serrated and each terminating in a small spine directed backward; membrane shining brassy-brown; posterior femora somewhat strongly incrassated in both sexes, finely tuberculous above, spinous beneath; posterior

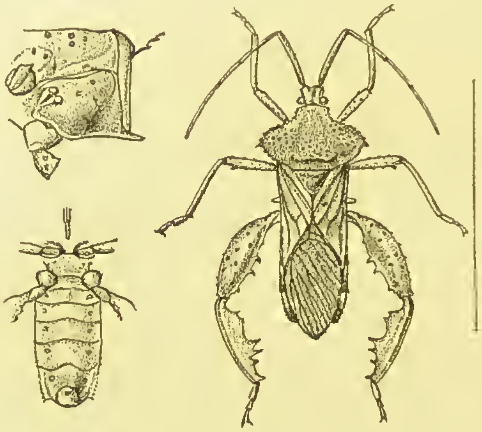

Fig. 211.—*Petillia patulicollis.*

tibiæ dilated on inner margin and very irregularly dentate, broadest near base, and most strongly spined a little before apex; in the male there is a prominent spine on each side at base of metasternum.

Length 26 to 31; breadth between pronotal angles 11 to 13 millim.

Hab. Sikhim. Nága Hills (*Chennell*).

571. **Petillia valida**, *Dall.* (Mictis) *List Hem.* ii, p. 398 (1852).

Black, somewhat shining; anterior and intermediate legs and the posterior tarsi ochraceous; apices of the anterior and intermediate femora, bases and apices of the anterior and intermediate tibiæ, and apices of all the tarsi black; legs moderately pilose, anterior and intermediate femora with small black spines and tubercles; posterior tibiæ in the male dilated, inwardly gibbous and obsoletely spinous near base, then concave and serrated to about one-third before apex, where there is a very strong spine, thence spined to apex, the spines decreasing in length; pronotal margins strongly serrated, the lateral angles moderately prominent, deflected, recurved, with an acute apical spine.

Length 25; breadth between pronotal angles 11 millim.

Hab. Ceylon (*Parry*, *Brit. Mus.*).

572. **Petillia calcar**, *Dall.* (Mictis) *List Hem.* ii, p. 397. 33 (1852); *Dist. A. M. N. H.* (7) vi, p. 376 (1900).
Trematocoris subvittata *and* vittata, *Walk. Cat. Het.* iv, pp. 34 & 36. 9 & 12 (1871).
Melucha notatipes, *Walk. Cat. Het.* iv, p. 56. 9 (1871). (Immature form.)

Ochraceous or brownish-ochraceous, obscurely pilose; pronotum with some scattered black tuberculous points and sometimes with distinct longitudinal dark fasciæ, the lateral margins darkly serrate, the lateral angles only moderately produced, their apices pointed and slightly directed backward; veins of the corium piceous; posterior femora incrassated, more strongly so in males, with small scattered dark tubercles; obsoletely spined beneath, and with a broad black central and apical annulation, much more distinct in some specimens than in others; posterior tibiæ inwardly dilated and strongly dentate, the two most prominent spines near base, where the dilatation is broadest: body beneath paler, with small scattered black spots; connexivum alternately ochraceous and piceous.

Length 22 to 27; breadth between pronotal angles 9 to 10 millim.

Hab. Sikhim. Khási Hills (*Chennell*). Nága Hills (*Butler*). Bombay (*Leith*). Ceylon (*Green*). Burma; Bhamo, Palon (*Fea*), Upper Tenasserim (*Coll. Dist.*).—I possess a specimen from the Philippine Islands.

Division *DALADERARIA*.

Daladeraria, *Stål, En. Hem.* iii, p. 35 (1873).
Daladeridæ, part., *Leth. & Sev. Cat. Gén. Hém.* ii, p. 28 (1894).

The *Daladeraria* differ from the *Petascelaria* in having the posterior coxæ much nearer to each other, not widely separated; the abdominal spiracles small and rounded; the posterior femora rarely incrassated or spined. The abdomen is broadly ampliated; the second abdominal incisure is at the lateral areas moderately inclined forward, and the fourth distinctly recurved at the same position; the abdominal spiracles on the central segments are much farther removed from their lateral than from their apical margins; the antennæ are long, the first joint not shorter than the second and longer than the head; the rostrum reaches the centre of the mesosternum.

A small Division containing only three or four genera, which, with one exception (*Dalader*), belong exclusively to the Ethiopian Region.

Genus DALADER.

Dalader, *Amy. & Serv. Hém.* p. 187 (1843); *Dall. List Hem.* ii, p. 377 (1852); *Stål, Hem. Afr.* ii, p. 1 (1865).

Type, *D. acuticosta*, Amy. & Serv.

Distribution. Oriental and Ethiopian Regions.

Head moderately long, prominently cleft between the apices of

the lateral lobes; antennæ cylindrical, the first joint a little the stoutest, third joint foliaceously dilated on each side; pronotum with the lateral angles always (sometimes strongly) dilated; abdomen strongly dilated on each side; femora moderately thickened, granulate, more or less spinous beneath.

573. **Dalader acuticosta,** *Amy. & Serv. Hém.* p. 188, pl. iv, f. 7 (1843).
Stoll, Pun. f. 183.

Brownish-ochraceous, thickly and finely punctate; antennæ finely pilose, third joint foliaceously ampliated on each side,

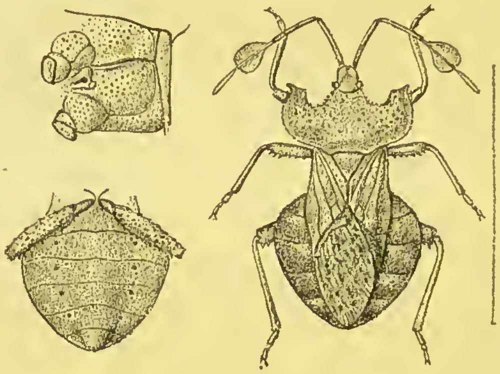

Fig. 212.—*Dalader acuticosta.*

fourth joint slender and a little paler in hue; pronotum with small scattered tubercles, a distinct central longitudinal carination, the lateral angles somewhat lunately produced, their apices obliquely truncate, the anterior lateral margins finely denticulate; membrane with obscure scattered darker spots; abdominal dilatations with paler reflections on each segment; sternum obsoletely granulate; abdomen distinctly and somewhat coarsely granulate.

Length 28 to 31; breadth between pronotal angles $14\frac{1}{2}$ to 15 millim.

Hab. Bengal: Jalpáiguri (*Ind. Mus.*). Sikhim; Mungphu (*Atkinson Coll.*). Assam; Margherita (*Doherty*), Khási Hills (*Chennell*), Sibságar (*Ind. Mus.*). Burma; Arakan (*Ind. Mus.*), Karennee, Bhamo (*Fea*). Tenasserim; Thagata (*Fea*).

574. **Dalader planiventris,** *Westw.* (Acanonicus) *in Hope Cat.* ii, p. 8 (1842).
Dalader rotundicosta, *Amy. & Serv. Hém.* p. 188 (1843).

Allied to *D. acuticosta*, from which it differs principally by the structure of the produced pronotal angles, which are more horizontally and less lunately produced, their apices obtusely rounded and moderately dentate before the anterior angles; the third joint of the antennæ is also less broadly dilated.

Length 23 to 28; breadth between pronotal angles 13 to 14½ millim.

Hab. Sikhim. Assam; Margherita (*Doherty*), Sibságar (*Ind. Mus.*). Bombay (*Leith*). Nilgiri Hills (*Ind. Mus.*). Ceylon (*Green*). Burma; Karenuee (*Doherty*, *Fea*), Palon (*Fea*), Mergui, Tavoy (*Ind. Mus.*).—Also found in the Malay Peninsula and Sumatra.

575. **Dalader rubiginosus**, *Westw.* (Acanonicus) *in Hope Cat.* ii, p. 8 (1842).
Dalader parvulus, *Dist. A. M. N. H.* (6) xii, p. 122 (1893).

Fuscous or reddish-ochraceous, somewhat thickly and finely punctate; antennæ black or piceous, pilose, the basal joint generally more or less brownish-ochraceous, third joint moderately foliaceously dilated; pronotum with a distinct central longitudinal carination, the lateral angles broadly, obtusely angularly, and horizontally produced, lateral margins finely serrate; membrane brownish or piceous; apex of scutellum paler in hue; legs and body beneath mottled with testaceous.

Length 17 to 20; breadth between pronotal angles 6½ to 8 millim.

Hab. Burma; Ruby Mines (*Doherty*), Teinzo, Bhamo, Palon (*Fea*).

Westwood gave as the habitat of his species "India orientalis." It was probably from Burma.

Division *BRACHYTARIA*.

Brachytaria, *Stål, En. Hem.* iii, p. 35 (1873).
Daladeridæ, part., *Leth. & Sev. Cat. Gén. Hém.* ii, p. 28 (1894).

In this Division the antennæ are shorter and thicker than in the *Daladeraria*, the first joint shorter than the second, not longer than the head; rostrum not, or slightly, extending beyond the anterior coxæ.

This Division consists of two or three genera, one of which is recorded only from British India.

Genus **BRACHYTES**

Brachytes, *Westw. in Hope Cat.* ii, p. 8 (1842).

Type, *B. bicolor*, Westw.

Distribution. British India.

Head moderately long, cleft between the apices of the lateral lobes; antennæ stout, subgranulose, basal joint not longer than head, much shorter than second joint; pronotum with the lateral angles rounded; lateral margins of the abdomen broadly dilated; legs moderate, femora not prominently incrassated; rostrum just passing the anterior coxæ.

576. **Brachytes bicolor**, *Westw. in Hope Cat.* ii, p. 8 (1842).

Ochraceous or reddish-ochraceous; head, antennæ, two transverse spots, generally fused, on anterior area of pronotum,

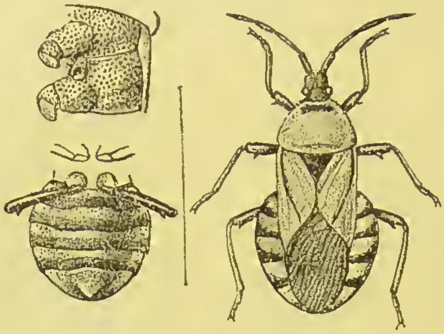

Fig. 213.—*Brachytes bicolor.*

scutellum, a spot, sometimes connected by a line with the base, on apical area of corium, membrane, segmental fasciæ and apex to connexivum, sternum, legs, segmental fasciæ to abdomen, sometimes connected on lateral areas, and the stigmata black; lateral margins of sternum ochraceous; pronotum and corium coarsely punctate; scutellum, body beneath, and legs finely granulose.

Length $22\frac{1}{2}$ to 25; breadth between pronotal angles 9 millim.

Hab. Assam (*Coll. Dist.*). Bombay; Bor Ghât (*Dixon*). Bangalore. Ceylon (*Templeton*).

Division *HOMŒOCERARIA.*

Homœoceraria, *Stål, En. Hem.* iii, p. 35 (1873).
Homœoceridæ, *Leth. & Sev. Cat. Gén. Hém.* ii, p. 35 (1894).

The *Homœoceraria* differ from the two previous Divisions by having the abdomen very rarely ampliated, usually elongate; the second and fourth abdominal incisures at their lateral areas straight or very obsoletely curved; spiracles of the central abdominal segments not farther removed from their lateral than from their apical margins; first joint of the antennæ a little shorter than the second, the two rarely of equal length.

Synopsis of Genera.

A. Central lobe of head distinctly deflected between the lateral lobes.
  a. Anal abdominal segment in female, as seen above, three times, or nearly three times, as broad as long.
    a. Pronotal angles very strongly anteriorly produced .... FRACASTORIUS, [p. 368.
    b. Pronotal angles rounded or slightly prominent, not anteriorly produced ...... HOMŒOCERUS, [p. 365.

B. Central lobe of head not deflected between the lateral lobes.
  b. Anal abdominal segment in female, as seen above, about twice as broad as long...... ASCHISTUS, p. 369.

Genus HOMŒOCERUS.

Homœocerus, *Burm. Handb.* ii, 1, p. 316 (1835); *Dall. List Hem.* ii, p. 438 (1852); *Stål, En. Hem.* iii, p. 57 (1873).
Ceratopachys, *Westw. in Hope Cat.* ii, p. 22 (1842).
Prismatocerus, *Amy. & Serv. Hém.* p. 185 (1843).
Philonus, *Dall, List Hem.* ii, pp. 438 & 448 (1852).
Ornytus, part., *Dall. List Hem.* ii, pp. 438 & 447 (1852).
Tliponius, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 464.
Anacanthus, *Uhler, Proc. Ac. Philad.* 1860, p. 227.
Anacanthocoris, *Uhler, op. cit.* 1861, p. 287.
Diocles & Tagus, *Stål, Hem. Afr.* ii, pp. 5, 67 & 68 (1865).

Type, *H. puncticornis*, Burm., from the Philippines.

Distribution. Ethiopian, Oriental, and Eastern Palæarctic Regions.

The characters given for the diagnosis of the *Homœoceraria* are the principal points in the distinction of this large and variable genus, which is not only the type of the Division but by far its largest constituent. A number of generic divisions have from time to time been proposed, as may be seen by the synonymy; but by general consent these have been considered untenable, for though applicable to some small groups of species, they break down when used for others which are decidedly connecting-links between the sections. The same difficulty is found in making sectional divisions of the species. The comparative lengths of the third and fourth joints of the rostrum undoubtedly create two sectional characters; but beyond this I have been unable to formulate an analytical synopsis. There is a gradual transition from species having the pronotal angles well developed, with long and slender antennæ, to others in which those angles are not prominent, combined with much shorter antennæ, the last joint of which tends to become shortened and thickened; the body also, from being elongate and straight, approaches a shorter and more laterally dilated formation.

The genus is concentrated in the Oriental Region, is fairly represented in the Ethiopian Region, and just enters the Palæarctic Region in China and Japan, and again in Sind.

A. *Rostrum with the third joint longer than the fourth.*

577. **Homœocerus inornatus**, *Stål, En. Hem.* iii, p. 58 (1873).

Ochraceous; antennæ very pale castaneous; meso- and metasterna with a very small fuscous spot on each lateral area; membrane obscure hyaline, with the basal angle piceous; antennæ with the first and second joints longest, second a little longer than the first, third joint subequal in length to the first, fourth shortest;

pronotum with the lateral angles moderately and subacutely produced, between them the disk is sometimes indistinctly infuscated; abdomen in the female slightly ampliated.

Length 13 to 16; breadth between pronotal angles 4 to $4\frac{1}{2}$ millim.

Hab. Sikhim (*Coll. Dist.*). Pondicherry (*Stockholm Mus.*). Burma; Rangoon (*Brit. Mus.*).—Also recorded from China.

578. **Homœocerus signatus**, *Walk. Cat. Het.* iv, p. 97. 19 (1871); *Kirby, J. Linn. Soc., Zool.* xxiv, p. 91 (1891).
Homœocerus biplagiatus, *Stål, En. Hem.* iii, p. 59 (1873).

Ochraceous; a broad basal fascia to the pronotum between the lateral angles and the corium pale castaneous; corium with a

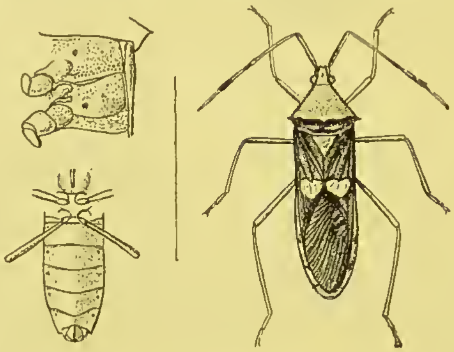

Fig. 214.—*Homœocerus signatus.*

large transverse macular spot at inner angle and the lateral margins luteous; head with a narrow fascia on each side before eyes, and the subgranulous lateral margins of the pronotum, black; antennæ with the first and second joints pale castaneous, third joint luteous, apices of second and third joints black, second joint longer than the first, third a little shorter than first; meso- and metasterna with a black spot on each lateral area; lateral angles of the pronotum moderately and subacutely produced.

Length 19 to 21; breadth between pronotal angles 6 millim.

Hab. Sikhim (*Knyvett*). Bombay (*Leith*). Khandála (*Dixon*). Ceylon (*Templeton & Green*).

Mr. Dixon writes me that at Khandála he found this species to be nocturnal and very fond of brilliant light.

579. **Homœocerus sigillatus**, *Stål, En. Hem.* iii, p. 59 (1873).

Closely allied to the two preceding species, but differing by the more slender antennæ, the luteous spot to the corium smaller, not transverse, but posteriorly oblique and confined to the inner angular area.

Length 14 to 18; breadth between pronotal angles 5 to 6 millim.

Hab. Sikhim (*Coll. Dist.*); Mungphu (*Coll. Atkinson*).

580. **Homœocerus prominulus,** *Dall.* (Ceratopachys) *List Hem.* ii, p. 501 (1852).
Ceratopachys vicinus, *Dall. loc. cit.*

Head, pronotum, body beneath, and legs ochraceous; a transverse fascia between the lateral angles of the pronotum and the corium castaneous; scutellum, and a large ochraceous spot at inner angle of corium, ochraceous; connexivum ochraceous spotted with castaneous; membrane cupreous, piceous at base; head with a short black fascia at inner margin of eyes; antennæ robust, first joint pale castaneous, second ochraceous, with the base narrowing and the apex broadly piceous, third joint ochraceous with the apical half piceous, first and third joints subequal in length, second longest; pronotum deflected anteriorly, lateral angles subprominent; connexivum exposed.

Length 15 to 17; breadth between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. North Bengal. Bombay (*Brit. Mus.*). Ceylon (*Green*).

Closely allied in appearance to *H. signatus*: antennæ shorter and more robust; pale spot to corium much broader posteriorly.

581. **Homœocerus variabilis,** *Dall.* (Ceratopachys) *List Hem.* ii, p. 502 (1852).
Tliponius insignicornis, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 465.
Homœocerus anticus, *Walk. Cat. Het.* iv, p. 98, 25 (1871).

Head, pronotum, and scutellum ochraceous or greenish-ochraceous; lateral margins of the head and pronotum and a broad basal fascia between the pronotal lateral angles dark castaneous; corium more or less shaded with castaneous, the anterior-lateral and apical margins and a marginal spot at inner angle pale luteous; membrane dark bronzy; body beneath and legs pale ochraceous, apices of femora, the tibiæ and tarsi castaneous: antennæ stout, dark castaneous, bases of second and third joints luteous, first and third joints subequal in length, second a little the longest, fourth shorter, third somewhat dilated at apex; pronotum with the lateral angles subprominent.

Length 13 to 16; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.

Hab. North India (*Brit. Mus.*). Madras (*Coll. Dist.*).

582. **Homœocerus rosaceus,** sp. n.

Allied to *H. variabilis*, but much smaller; head and pronotum without the dark lateral or basal fasciæ; corium rosaceous, not castaneous, the inner pale luteous spots minute; femora wholly ochraceous; antennæ paler in hue, with the second and third joints distinctly sulcate; rostrum with the third joint slightly longer than the fourth.

Length 12; breadth between pronotal angles 3 millim.

Hab. Sind; Karáchi (*Coll. Dist.*).

B. *Rostrum with the third and fourth joints equally long, or third joint a little shorter than fourth.*

583. **Homœocerus cordiger,** *Stål* (Tliponius), *Öfv. Vet.-Ak. Förh.* 1859, p. 465; *id. En. Hem.* iii, p. 63 (1873).

I have not seen this species. Stål describes it as not very distinguishable from *H. prominulus*, as allied to *H. signatus* and *sigillatus* by the punctuation and coloration of the hemelytra, but as differing from all these species by having the third and fourth joints of the rostrum equally long.

Length ♂ 14 millim.

Hab. Tranquebar.

584. **Homœocerus walkeri,** *Kirby, J. Linn. Soc., Zool.* xxiv, p. 91 (1891).
Homœocerus fascifer, var. ?, *Walk. Cat. Het.* iv, p. 94 (1871).

Head, pronotum, scutellum, basal lateral margins of corium, body beneath, and legs ochraceous; central punctures and a lateral fascia to head on each side before eyes subgranulose, lateral margins and a broad basal fascia between lateral angles of pronotum and the corium purplish-brown; two small spots, placed transversely and sometimes analgamated at inner angle of corium, luteous; antennæ pale castaneous, apical joint infuscated, apices of second and third joints piceous, first joint much shorter than second and slightly longer than third, the apex of which is a little dilated; lateral angles of the pronotum moderately subacutely prominent. In some varietal forms the spots to the corium are practically absent.

Length 18 to 19; breadth between pronotal angles $5\frac{1}{2}$ to 6 millim.

Hab. Sikhim (*Atkinson Coll.*). Assam; Margherita (*Doherty*), Khási Hills (*Chennell*), Nága Hills (*Ind. Mus.*). Ceylon (*Green*). Burma; Bhamo, Metanja, Palon (*Fea*). Tenasserim; Taoo (*Coll. Dist.*).

585. **Homœocerus lacertosus,** *Dist. Ent. Month. Mag.* xxv, p. 230 (1889)

Greenish or greenish-ochraceous; body beneath, antennæ, eyes, and legs ochraceous; lateral margins of the pronotum narrowly reddish-ochraceous; corium with a small whitish levigate spot situate a little before the apical margin; abdomen above brownish-ochraceous; antennæ moderately robust, first joint shorter than second which is longest, third and fourth joints shortest and subequal in length; apical joint cylindrical and moderately thickened; pronotum with the lateral angles subacutely prominent.

Length 21; breadth between pronotal angles $6\frac{1}{2}$ to 7 millim.

Hab. Oudh; Shahabad (*Atkinson Coll.*). N.W.P.; Sahâranpur (*Coll. Dist.*).

586. **Homœocerus atkinsoni**, *Dist. A. M. N. H.* (7) vii, p. 10 (1901).

Ochraceous, thickly and coarsely punctate, the punctures black on the corium and scutellum, and forming a more or less distinct transverse fascia between the lateral angles, three somewhat indistinct discal longitudinal lines, and distinct lines on the extreme lateral margins of the pronotum; body beneath and legs ochraceous, darkly punctate; a small fuscous spot on each lateral area of the meso- and metasterna, the stigmata and small abdominal spots of the same colour; spots near coxæ and posterior margin of metasternum luteous; antennæ black, fourth joint fuscous with its apex ochraceous, second joint longest, first, third, and fourth joints subequal in length; lateral angles of the pronotum subacutely prominent; abdomen broader than hemelytra beyond their middle; lateral margins and apex of scutellum and margins and venation of corium levigate; internal angle of the membrane fuscous.

Length 13 to 14; breadth between pronotal angles 4½ to 5 millim.

Hab. Assam (*Atkinson Coll.*). Nága Hills (*Doherty*).

587. **Homœocerus tinctus**, *Dist. A. M. N. H.* (5) xi, p. 170 (1883).

Ochraceous, thickly and finely darkly punctate; antennæ pale castaneous, first joint shorter than second which is longest, third and fourth subequal in length, second and third slightly infuscated near their apices, fourth, excluding basal third and apex, subinfuscated; membrane pale fuliginous hyaline, with the internal area black; abdomen above pale reddish: body beneath and legs pale ochraceous; pronotal angles subprominent and obtusely angulated.

Length 14 to 16; breadth between pronotal angles 5 millim.

Hab. Tenasserim (*Coll. Dist.*). Mergui (*Anderson*).

588. **Homœocerus rubefactus**, sp. n.

Purplish-red, coarsely blackly punctate; on the pronotum these black punctures form a narrow lateral margin, a broad basal fascia between the lateral angles, a narrow central longitudinal line, on each side of which is a small subanterior and a larger discal spot; antennæ dark castaneous, second and third joints more or less piceous, fourth joint brownish, second joint longest, first, third, and fourth joints subequal in length; head ochraceous, the disk blackly granulose; membrane fuliginous: body beneath ochraceous, legs purplish-red; sternum coarsely punctate, a small fuscous spot on each lateral area of meso- and metasterna; stigmata and small spots on abdominal lateral areas black; lateral pronotal angles broadly subacutely prominent, their apices slightly notched and upwardly recurved.

Length 15 to 16; breadth between pronotal angles 4½ to 5 millim.

Hab. Burma; Palon, near Rangoon (*Fea*).

589. **Homœocerus biguttatus**, *Westw. in Hope Cat.* ii, p. 22 (1842).
Homœocerus sikkimensis, *Dist. Ent. Month. Mag.* xxv, p. 231 (1889).

Ochraceous, legs and antennæ somewhat darker; membrane pale bronzy; corium with a small obscure pale discal spot near the inner angle; antennæ pale castaneous, long and slender, first joint almost as long as the second, third a little longer than the fourth, which is cylindrical, moderately thickened and pale ochraceous with its apical half fuscous; body long, pronotum with the lateral angles only slightly and subacutely prominent; body beneath pale shining ochraceous.

Length 21; breadth between pronotal angles 6 millim.

Hab. Sikhim (*Coll. Dist.*).

590. **Homœocerus striicornis**, *Scott, A. M. N. H.* (4) xiv, p. 362 (1874).

Greenish or pale ochraceous; antennæ pale castaneous, the first and second joints exteriorly with a longitudinal black line, fourth joint stramineous with its apical half infuscated, first and second joints subequal in length, third shortest, considerably shorter than fourth; pronotum long, the lateral margins with a fine black line, the lateral angles distinctly angulately prominent, the disk with an obscure central levigate line; corium with a distinct subcostal black line: body beneath and legs paler in hue; rostrum with the third joint considerably shorter than fourth.

Length 17 to 20; breadth between pronotal angles $4\frac{1}{2}$ to $5\frac{1}{2}$ millim.

Hab. Sikhim. Assam. Bombay (*Coll. Dist.*), Bor Ghât (*Dixon*). Ceylon (*Green & Lewis*).—Also found in Japan, whence it was first described.

Mr. Dixon found this species at the Bor Ghât on *Strobilanthes callosus*, Nees.

591. **Homœocerus angulatus**, *Westw. in Hope Cat.* ii, p. 22 (1842); *Dist. A. M. N. H.* (7) vii, p. 8 (1901).
Homœocerus clarus, mundus, & parallelus, *Walk. Cat. Het.* iv, pp. 94, 99, & 100 (1871).

Ochraceous; extreme lateral margins of pronotum, exterior claval margins, a subcostal linear fascia to corium, and basal angle of membrane black; pronotum with the anterior area almost impunctate, remaining surface coarsely punctate and subrugulose, lateral angles subacutely prominent, much more strongly so in some specimens than in others; antennæ long, very pale castaneous, first, second, and third joints with an outer black marginal line, basal joint about as long as pronotum and subequal in length to third and fourth joints, second joint longest, apical joint piceous, with its base broadly luteous; rostrum with the third joint slightly shorter than the fourth.

Length 19 to 22; breadth between pronotal angles 6 to 8 millim.
Hab. Malabar (*Brit. Mus.*).—Common in the Malay Peninsula, Borneo, and Sumatra.

592. **Homœocerus subjectus,** *Walk. Cat. Het.* iv, p. 97. 20 (1871).

Pale ochraceous, finely and thickly punctate; a basal fascia to pronotum between the lateral angles, a marginal claval fascia, and the posterior margin (narrowly) of the corium purplish-red; a somewhat large rounded whitish spot at inner angle of corium: antennæ pale castaneous, first and second joints longest and subequal in length, third shorter, fourth wanting in all the specimens examined; pronotum with a faint central longitudinal line, the lateral angles obsoletely subangulately subprominent; membrane pale, piceous at base and with a piceous spot on each lateral margin; rostrum with the third joint slightly shorter than the fourth.

Length 17 to 18; breadth between pronotal angles 5 millim.
Hab. Assam (*Coll. Dist.*). The type was from Siam.

593. **Homœocerus albiguttulus,** *Stål, En. Hem.* iii, p. 61 (1873).

Ochraceous or greenish-ochraceous; corium with a small pale luteous transverse spot near inner angle broadly margined posteriorly with piceous; antennæ very pale castaneous, long, slender, second joint longest, first, third, and fourth joints subequal in length, fourth joint luteous with its apical half black; corium darkly punctate, its lateral margins paler in coloration; pronotum with a faint central levigate longitudinal line, the lateral angles subacutely prominent; rostrum with the third and fourth joints subequal in length; legs ochraceous, tibiæ and tarsi usually more testaceous in hue.

Length 16 to 20; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.
Hab. Sikhim. Khási Hills (*Chennell*). Sibságar (*Ind. Mus.*). Burma; Ruby Mines (*Doherty*), Karennee, Palon (*Fea*).—The type was described from Cochin China; I possess specimens from the Malay Peninsula and Sumatra.

594. **Homœocerus fasciolatus,** *Stål, En. Hem.* iii, p. 60 (1873).

Brownish-ochraceous, thickly and darkly punctate, corium darker in hue; posterior margins of the pronotum and the scutellum obscure luteous; extreme lateral margins of the pronotum and corium, a transverse fascia, not reaching lateral margin, inner angle of corium, body beneath, and legs ochraceous; membrane dark cupreous, piceous at base; a small fuscous spot on each lateral area of meso- and metasterna; antennæ brownish, second joint longer than the first, third shorter than first; rostrum with

tho third joint slightly shorter than the fourth; lateral angles of the pronotum obtusely angulately prominent, their apices slightly recurved upwardly.

Length 13 to 17; breadth between pronotal angles 4 to 5 millim.

Hab. Sikkim. Burma; Momeit (*Doherty*).

595. **Homœocerus albiventris,** *Dall. List Hem.* ii, p. 444 (1852); *Stål, En. Hem.* iii, p. 61 (1873).

Ochraceous, finely and darkly punctate; corium unspotted, or with an obsolete pale spot close to the inner angle of the membrane; between the pronotal lateral angles the punctures are a little darker or obsoletely reddish; scutellum with the apex pale luteous; membrane transparent, with the basal and inner margins and sometimes a spot on the outer margin brownish; abdomen above bright carmine-red, with the apical portion and margins, or with a central median fascia, luteous: body beneath yellowish-white or pale ochraceous; legs ochraceous; antennæ ochraceous, apical joint brownish, luteous at base, first and fourth joints subequal in length; rostrum with the third joint slightly shorter than the fourth; lateral pronotal angles subacutely subprominent.

Length 16 to 17; breadth between pronotal angles 5 to 6 millim.

Hab. Bombay (*Coll. Dist.*). Nilgiri Hills (*Hampson*).

596. **Homœocerus limbatipennis,** *Stål* (Tliponius), *Öfv. Vet.-Ak. Förh.* 1859, p. 464; *id. En. Hem.* iii, p. 60 (1873).

Ochraceous, thickly and darkly punctate; lateral margins of head and pronotum, a central line to head, the lateral margins of the corium and the connexivum, luteous; subcostal margins and a small discal spot beyond middle of corium black; antennæ very dark ochraceous, basal joint sometimes paler, first, third, and fourth joints subequal in length, second a little the longest, fourth with its apex luteous; membrane bronzy, basal margin piceous: body beneath and legs luteous; a small spot on each lateral area of pro- and mesosterna, two similar spots on each side of metasternum, and a segmental series of spots on each side of abdomen, black; rostrum with the third and fourth joints subequal in length; lateral pronotal angles somewhat spinously prominent.

Length 15 to 17; breadth between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. Burma; Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Found in the Malay Peninsula and in several islands of the Malay Archipelago.

597. **Homœocerus punctum**, *Dall. List Hem.* ii, p. 446 (1852); *Stål, En. Hem.* iii, p. 61 (1873).

Brownish-ochraceous, thickly and finely punctate, lateral margins of the pronotum and corium usually more or less distinctly paler; corium with a small whitish rounded spot near apical margin, usually but not always surrounded by piceous: body beneath and legs ochraceous, the central disk from head to apex of abdomen paler and scarcely punctate; antennæ ochraceous, covered with minute brown points, apices of the first, second, and third joints black, apex of fourth joint infuscated, first, second, and fourth joints subequal in length, third a little the shortest; rostrum with the third and fourth joints subequal in length. Body long, slender, elongate; lateral angles of the pronotum rounded, not acutely prominent.

Length 15 to 18; breadth between pronotal angles 4 millim.

Hab. Sikhim. Burma; Karennee (*Fea*). Tenasserim; Myitta (*Doherty*), Malewoon, Thagata (*Fea*).—Common in the Malay Peninsula; I possess a specimen from Celebes; it was described with doubt as from Corea.

In some specimens the antennæ are almost unicolorous.

598. **Homœocerus simiolus**, sp. n.

Ochraceous or brownish-ochraceous, sometimes with a purplish tinge, finely and darkly punctate; antennæ very pale castaneous, apices of the first, second, and third joints obsoletely blackish, first joint slightly shorter than the pronotum, second longest, apical joint ochraceous, more or less infuscated; pronotum with the lateral margins finely, blackly, subserrulate, the lateral angles subprominent; corium unspotted, the lateral margins luteous: body beneath and legs pale luteous or greenish-luteous, meso- and metasterna with a small black spot on each lateral area; rostrum with the third and fourth joints subequal in length.

Length $15\frac{1}{2}$ to 17; breadth between pronotal angles 4 millim.

Hab. Sikhim. Assam; Khási Hills (*Chennell*), Sibságar (*Ind. Mus.*). Tenasserim; Myitta (*Doherty*).

Allied to *H. immaculipennis*, Stål, but differing by the black lateral pronotal margins, the spotted sternum, &c.

599. **Homœocerus graminis**, *Fabr.* (Lygæus) *Syst. Rhyng.* p. 216. 55 (1803); *Stål, Hem. Fabr.* i, p. 59 (1868).
Homœocerus turbidus, *Walk. Cat. Het.* iv, p. 95. 15 (1871).

Greenish or greenish-ochraceous, densely punctate above and on sternum beneath, abdomen much more faintly punctate; a small spot near anterior angle of corium, and a fascia extending through each lateral area of the body beneath, whitish; membrane pale bronzy, darker at base; antennæ long, pale castaneous, first and second joints longest, second a little longer than first, third shorter

than first and subequal in length to fourth; pronotal lateral angles subprominent; rostrum with the third and fourth joints subequal in length.

Length 17 to 20; breadth between pronotal angles 4 to 5 millim.

Hab. Ceylon (*Green*). Khási Hills (*Chennell*). Tenasserim; Myitta (*Doherty*).

600. **Homœocerus concisus,** *Walk. Cat. Het.* iv, p. 97. 21 (1871).

Dark chocolate-brown; lateral and basal margins of the pronotum, lateral margins of the corium, connexivum, body beneath, and legs luteous; antennæ with the first and second joints longest and subequal in length, third and fourth shorter and subequal; pronotum about as long as broad at base, lateral angles subangular but not prominent; membrane shining cupreous; apices of tibiæ and the tarsi infuscated; rostrum with the third and fourth joints almost subequal in length.

Var. *a.* Corium with a whitish lateral spot a little before apex.

Var. *b.* Corium with a transverse whitish spot, not commencing on lateral border but continued to inner margin.

Length 14 to 16; breadth between pronotal angles 3 to 4 millim.

Hab. Sikhim; Mungphu (*Coll. Dist.*). Burma; Karennee (*Fea*).—Siam (*Brit. Mus.*).

601. **Homœocerus macula,** *Dall. List Hem.* ii, p. 445 (1852).

Brownish-ochraceous; thickly, finely, and darkly punctate; posterior margin of the pronotum, apex of the scutellum, lateral margins of the corium, and a somewhat broad spot a little before its apex, body beneath and legs luteous; antennæ castaneous, apical joint brownish-ochraceous, its base a little paler, first, third, and fourth joints almost subequal in length, second joint longest; pronotum with a faint central levigate line, lateral angles rounded, not prominent; a small black spot on the lateral areas of meso- and metasterna; apex of rostrum black.

Length 16 to 17; breadth between pronotal angles $4\frac{1}{2}$ to $5\frac{1}{2}$ millim.

Hab. Nilgiri Hills (*Hampson*). Tenasserim (*Coll. Dist.*).

602. **Homœocerus sinicus,** *Walk. Cat. Het.* iv, p. 98. 24 (1871).

Ochraceous, somewhat coarsely punctate; pronotum with the lateral margins somewhat piceous, and with a short central levigate line on its anterior disk; antennæ subgranulous, castaneous, second joint and apical half of third joint piceous, first joint about one-third longer than fourth, second longest, longer than third, third longer than first, first and fourth stoutish; corium with the anterior lateral margin luteous: body beneath and legs luteous; pro-, meso-, and metasterna with a minute fuscous spot on each lateral area.

Apparently closely allied to *H. singalensis*, but differing by the colour of the antennæ; and the narrow piceous lateral margins to the pronotum.

Length 14; breadth between pronotal angles $3\frac{1}{2}$ millim.

Hab. Burma; Ruby Mines (*Doherty*).—The type was from Hong Kong.

603. **Homœocerus singalensis**, *Stål, En. Hem.* iii, p. 60 (1873).
Tliponius cingalensis, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 465.

"Palely sordidly flavescent, above very densely ferruginously punctate, an obsolete medial levigate line to pronotum; antennæ testaceous, fourth joint, excluding base, nigro-fuscous; anterior lateral margin of the corium paler; three small lateral punctate spots to sternum; stigmata infuscated; antennæ with the fourth joint about one-third shorter than the first, which is a little longer than the head; lateral angles of the pronotum obtusely slightly prominent, lateral margins straight; abdomen a little broader than the hemelytra."

♀. Length $12\frac{1}{2}$; lat. $3\frac{1}{3}$ millim.

Hab. Ceylon.—Also recorded from North China.

I have not seen this species.

604. **Homœocerus perpunctatus**, sp. n.

Luteous, somewhat thickly blackly punctate; lateral margins of pronotum and corium somewhat broadly luteous; eyes, a central longitudinal line to pronotum and the posterior margin, narrowly, to same, apex of scutellum, margins of interior angles to corium, body beneath, and legs luteous; membrane bronzy-brown, distinctly piceous at base; antennæ castaneous, finely black-speckled, subgranulose and very obsoletely pilose, first and second joints longest and subequal in length, third and fourth joints shortest and subequal, first and fourth joints stoutest; lateral angles of pronotum very obsoletely and subangulately prominent; sternum coarsely punctate, with a small fuscous spot on each side of meso- and metasterna.

Length 13; breadth between pronotal angles 3 millim.

Hab. Ceylon (*Brit. Mus.*).

605. **Homœocerus taprobanensis**, sp. n.

Brownish-ochraceous, thickly and rather darkly punctate; head, pronotum, and scutellum with a central levigate line, which is somewhat obsolete on head; lateral margins of the pronotum subserrulate and subpiceous; membrane bronzy: body beneath and legs paler ochraceous; a subfoveate pale longitudinal fascia on each lateral area, and the abdomen with several longitudinal series of black punctures; sternum very coarsely punctate; antennæ brown, second joint longest, fourth slightly shorter than first;

rostrum with the third and fourth joints subequal in length; pronotal angles not prominent.

Length 15; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Ceylon (*Green*).

606. **Homœocerus nigridorsum,** *Horv. Termész. Füzetek,* 1889, p. 34.

Reddish-ochraceous, thickly and rather coarsely punctate; pronotum with an obsolete central levigate line; apex of scutellum and anterior lateral margins of corium pale ochraceous, impunctate; head with a central infuscated sulcation; antennæ short, stout, second joint longest, fourth shortest, shorter than first; abdomen above black; connexivum, two discal spots, an apical median line, and six small spots on each lateral area luteous: body beneath luteous, sternum coarsely punctate, legs reddish-ochraceous; rostrum with the third joint slightly shorter than fourth; lateral pronotal angles subprominent.

Length 13 to 14; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Himalaya (*Mus. Nat. Hungar.*). Nilgiri Hills (*Hampson*).

607. **Homœocerus montanus,** *Dist. A. M. N. H.* (7) vii, p. 11 (1901).

Ochraceous; apical joint of antennæ (excluding extreme base) roseate; apical area of corium more or less infuscated; abdomen above ochraceous, with a double series of subquadrate sanguineous spots; antennæ with the first and fourth joints incrassated, second joint longest, third slightly shorter than fourth, which is subequal in length to first joint; body above coarsely punctate; rostrum with the third joint shorter than fourth.

Var. Posterior margin of the pronotum, clavus, and internal area of corium infuscated.

Length 14 to 17; breadth between pronotal angles 4 to 5 millim.

Hab. Nilgiri Hills (*Hampson*). Kanara (*Coll. Dist.*).

608. **Homœocerus serrifer,** *Westw.* (Coreus) *in Hope Cat.* ii, p. 24 (1842); *Dist. P. Z. S.* 1901, i. p. 329.

Homœocerus unipunctatus, *Dall.* (*nec Thunb.*) *List Hem.* ii, p. 447 (1852).

Homœocerus parvulus, *Walk. Cat. Het.* iv, p. 101. 32 (1871).

Ochraceous, thickly and somewhat darkly punctate; corium with a small discal fuscous spot on the apical area; lateral margins of the pronotum and basal lateral margins of corium pale luteous: body beneath and legs luteous; a small fuscous spot on each lateral area of meso- and metasterna; abdomen with a longitudinal series of small fuscous or blackish spots on each lateral area and some scattered spots of the same size and colour on disk; antennæ ochraceous or very pale castaneous, apices of second and third joints sometimes obsoletely fuscous, second joint longest,

first and third subequal in length, fourth shortest, much shorter than first; pronotum with the lateral margins obsoletely serrate, the lateral angles moderately angulately prominent.

Length 12 to 14; breadth between pronotal angles 4 to $4\frac{1}{2}$ millim.

Hab. Khási Hills (*Chennell*). Ceylon (*Lewis*). Burma; Karennee, Prome, Bhamo (*Fea*). Tenasserim; Myitta (*Doherty*).—Also found in the Malay Peninsula and Java.

Very closely allied to *H. unipunctatus* from China and Japan, but a narrower and slightly smaller species.

609. **Homœocerus marginiventris**, *Dohrn, Stett. ent. Zeit.* xxi, p. 402 (1860); *Stål, En. Hem.* iii, p. 59 (1873).

Ochraceous, thickly brownly punctate, pronotum and scutellum with a central pale levigate line; body beneath and legs ochraceous, sternum very coarsely punctate, and with a small fuscous spot on lateral area of each segment; abdomen subrugulose, nebulously fuscous-punctate, lateral margins above and beneath spotted with black; antennæ dull ochraceous, apex of first joint, the second joint, and sometimes third joint piceous, basal joint thickly covered with small black points, second joint longest, third a little longer and fourth a little shorter than first joint; head with a prominent central piceous incision; rostrum with the third joint a little shorter than fourth, lateral pronotal angles subprominent.

Length $12\frac{1}{2}$ to 13; breadth between pronotal angles $3\frac{1}{2}$ millim.

Hab. Ceylon (*Green*).

Var. Antennæ pale castaneous, apices of second and third joints black.

Length $13\frac{1}{2}$ to $15\frac{1}{2}$ millim.

Hab. Burma; Bhamo (*Fea*).

610. **Homœocerus lævilineus**, *Stål, En. Hem.* iii, p. 60 (1873).

Very closely allied to the preceding species, but margins of the abdomen luteous, unspotted; anterior lateral margins of the corium distinctly luteous; pronotal angles a little less prominent and more rounded.

Length 11 to $14\frac{1}{2}$; breadth between pronotal angles 3 to 4 millim.

Hab. Khási Hills (*Chennell*). Bombay; Bor Ghât (*Dixon*). Ceylon (*Vienna Mus.*). Burma; Karennee, Metanja (*Fea*).

Species doubtfully recorded from British India.

Homœocerus abbreviatus, Fabr. (*Lygæus*) Ent. Syst. iv, p. 150. 51 (1794).

Lethierry & Severin, in their Cat. Gén. Hém. ii, p. 35, give

"India" as a habitat for this species, doubtless based on the "India orientalis" of Fabricius. It appears to be a Malayan species.

Homœocerus dilatatus, Horv. Term. Füzetck, 1879, p. 145, t. vii, f. 2.

Lethierry & Severin (Cat. Gén. Hém. ii, p. 36) give as habitat of this species "India bor., Siberia or.," and, as they give a wrong bibliographical reference, have probably fallen into confusion. Horváth's locality is China.

Homœocerus lineatus, Walk. Cat. Het. iv, p. 97 (1871).

A species recorded from Burma, but no specimen with the name can be found in Brit. Mus. collection. The species is therefore regarded as non-existent.

Genus **FRACASTORIUS**, nov.

Type, *F. cornutus*, Dist.
Distribution. Burma.

Central lobe of head deflected between the lateral lobes; antennæ with the first and second joints almost subequal in length, or with first slightly shorter than second; pronotum with the lateral angles spinously and anteriorly produced, their apices about reaching a line through the eyes; sixth abdominal segment in the female very prominently emarginate; the female anal abdominal segment as seen above nearly three times as broad as long; rostrum with the third joint shorter than the fourth.

611. **Fracastorius cornutus**, sp. n.

Ochraceous, thickly and rather darkly punctate; lateral margins of head, anterior lateral margins and a central fascia to pronotum, fuscous; a shorter and more obsolete fascia on inner side of the produced angles, which are forwardly and acutely produced; antennæ very pale castaneous; membrane pale bronzy: body beneath luteous; legs ochraceous; sternum very coarsely punctate; abdomen with a series of foveate spots on each lateral area.

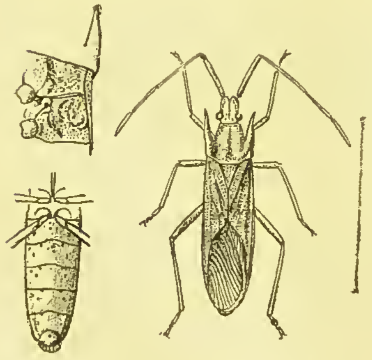

Fig. 215.—*Fracastorius cornutus.*

Length 21 to 22; breadth between apices of pronotal angles 5 millim.

Hab. Burma; Ruby Mines (*Doherty*), Teinzo and Karennee (*Fea*); Mergui; Tavoy (*Coll. Dist.*).

Genus ASCHISTUS.

Aschistus, *Stål, En. Hem.* iii, p. 57 (1873).

Type, *A. brevicornis*, Dall.
Distribution. Northern India.

In this genus the central lobe of the head is not deflected; the sixth abdominal segment in the female is posteriorly truncated, centrally emarginate, but not profoundly cleft; the female anal abdominal segment as seen above about twice, not three times, broader than long; hemelytra not reaching the apex of the abdomen.

One species only is at present described.

612. **Aschistus brevicornis,** *Dall.* (Oryntus?) *List Hem.* ii, p. 448 (1852); *Stål, En. Hem.* iii, p. 63 (1873).

Elongate; ochraceous, thickly and rather darkly punctate; membrane brassy, hyaline, not reaching the apex of abdomen: body beneath and legs very pale ochraceous; sternum very coarsely punctate, furrowed and ridged on each lateral area, a minute fuscous spot on each side of the meso- and metasterna; abdomen finely, darkly punctate, with a series of foveate spots on each lateral area: antennæ with the first, second, and third joints minutely dark-spotted; first, third, and fourth joints subequal in length; second joint longest: fourth cylindrical, infuscated towards apex.

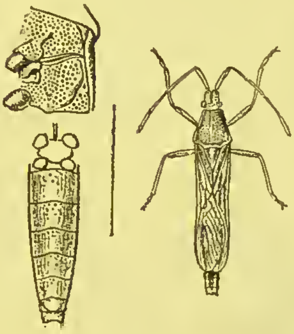

Fig. 216.—*Aschistus brevicornis.*

Length 15 millim.
Hab. North Bengal (*Brit. Mus.*).

Division *CLORESMARIA.*

Cloresmaria, *Stål, En. Hem.* iii, p. 35 (1873).

In this Division the posterior acetabula are somewhat profoundly detached from the posterior margin of the metasternum, their exterior margins being strongly out of line with those of the preceding acetabula; the area of the odoriferous apertures is transversely rugose, the odoriferous process elevated, but not reaching the anterior margin of the metasternum; the posterior femora are thickened and spinose.

Synopsis of Genera.

A. Rostrum about reaching the base of mesosternum. Antennæ with the first, second, and third joints of nearly equal length .... NOTOBITUS, p. 370.
B. Rostrum not reaching the base of mesosternum. Antennæ with the first joint shorter than the second .... CLORESMUS, p. 373.

Genus NOTOBITUS.

Notobitus, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 451; *id. En. Hem.* iii, p. 65 (1873).

Type, *N. meleagris*, Fabr.

Distribution. Oriental Region and China.

Antenniferous tubercles widely separated; anterior femora somewhat closely spined beneath; rostrum extending to the base of the mesosternum, the basal joint longest; apex of the head slightly produced; apex of prosternum not sulcated; posterior coxæ unarmed; antennæ with the first, second, and third joints of nearly equal length.

613. **Notobitus excellens**, *Dist. A. M. N. H.* (5) iii, p. 129 (1879).

Male. Head and pronotum brassy-black; antennæ with the first, second, and third joints subequal in length, brassy-black;

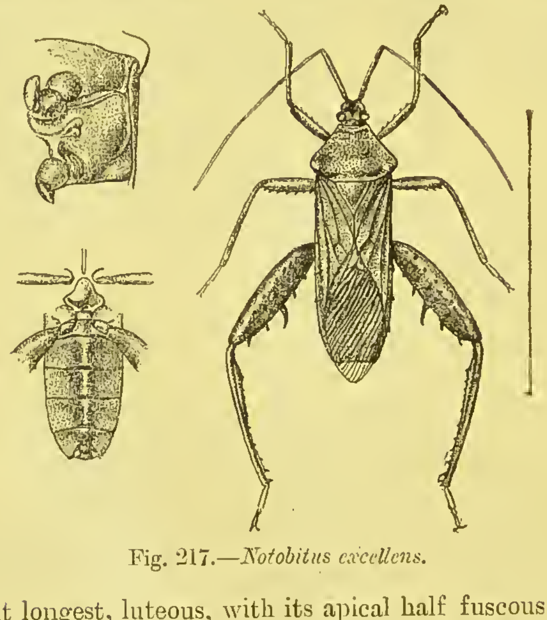

Fig. 217.—*Notobitus excellens.*

apical joint longest, luteous, with its apical half fuscous; rostrum extending to about base of mesonotum, the last two joints obscure luteous; pronotum finely granulate, lateral angles slightly prominent and rounded; scutellum finely granulate, brownish towards

apex; corium brown, obscurely and faintly pilose; membrane brassy-brown; abdomen above black, with *inconstant* luteous markings: body beneath and legs brassy-black, anterior and intermediate tibiæ with their apical halves brownish, all the tarsi dull luteous; posterior femora considerably incrassated, finely granulous, inwardly obscurely tuberculate, and with a series of acute tubercles on upper surface, beneath with a strong and curved spine a little beyond middle, preceded and followed by some smaller spines; posterior tibiæ moderately curved, their inner margin denticulated.

Female. Differs from the male in being uniformly pale brown above, and also paler in hue beneath; legs also generally paler than in the other sex.

Length 28 to 30; breadth between pronotal angles 8 to 9 millim.

Hab. Sikhim (*Ind. Mus.*); Mungphu (*Atkinson Coll.*). Khási and Nága Hills (*Chennell*).

614. **Notobitus meleagris,** *Fabr.* (Cimex) *Mant.* ii, p. 297. 179 (1787); *Wolff* (Lygæus), *Icon.* i, p. 23, f. 23 (1800); *Burm.* (Nematopus) *Handb.* ii, p. 337 (1835); *Herr.-Sch. Wanz. Ins.* vi, p. 79, f. 650 (1842); *Amy. & Serv. Hém.* p. 200 (1843).
Stoll, Pun. ff. 213 & 278.

Blackish-olivaceous, corium becoming a little browner on its apical area; tarsi, anterior and intermediate tibiæ, apices of the anterior and intermediate femora, and the bases of the posterior femora, luteous or ochraceous; antennæ blackish, basal area of fourth joint luteous; posterior femora in the male extending considerably beyond the apex of the abdomen, with a long spine beyond middle of inner surface, followed by some smaller spines; posterior tibiæ in the male with their inner margins strongly serrate; abdomen above black, with two ochraceous spots on each lateral margin before apex.

Length 22 to 25; breadth between pronotal angles 6 to 7 millim.

Hab. Nilgiri Hills (*Hampson*). China (*Coll. Dist.*).—Also recorded from several islands in the Malayan Archipelago.

Var. Bases of both third and fourth joints of antennæ luteous. Length 18 to 23 millim.

Hab. Bombay (*Leith*). Khási Hills (*Chennell*). Burma; Rangoon (*Brit. Mus.*), Bhamo, Teinzo (*Fea*).

615. **Notobitus dorsalis,** *Westw.* (Nematopus) *in Hope Cat.* ii, p. 13 (1842).

Brownish-ochraceous; antennæ with the bases of the second, third, and fourth joints luteous; abdomen above reddish-ochraceous, its apex and some incisural spots to connexivum black: body beneath pale castaneous, lateral margins of abdomen

luteous, incisural spots black; posterior femora elongate, moderately thickened, strongly spined on apical half of inner margin, usually bearing about five spines, of which the central is much the longest; tarsi luteous.

Length 21; breadth between pronotal angles 6 millim.

Hab. Bengal (*Oxford Mus.*). Bombay (*Leith*).

616. **Notobitus marginalis**, *Westw.* (Nematopus) *in Hope Cat.* ii, p. 14 (1842).

Brownish-ochraceous; head with a spot on each side near insertion of antennæ, a central patch, and a small spot behind each eye, anterior and lateral margins of pronotum, and lateral margins of head beneath, narrowly, and sternum and abdomen, broadly, resplendent bluish-green; abdomen above red, with a broad central black macular fascia, the connexivum luteous with black incisural spots: body beneath and legs luteous; antennæ fuscous, base of fourth joint luteous.

Length 24; breadth between pronotal angles 6 millim.

Hab. Nága Hills (*Chennell*). Shillong (*Coll. Dist.*).

617. **Notobitus affinis**, *Dall.* (Nematopus) *List Hem.* ii, p. 423 (1852).

Brownish or dark olivaceous; anterior and intermediate legs ochraceous; antennæ brownish or fuscous, base of the fourth joint luteous; posterior legs dark shining fuscous or olivaceous; posterior femora moderately thickened, male with a long spine beneath at about one-third from apex, preceded and followed by a smaller spine: abdomen above reddish-orange, with a central, more or less distinct longitudinal macular fascia; in the female the abdomen beneath is usually more or less suffused with ochraceous.

Length 18 to 20; breadth between pronotal angles 5 millim.

Hab. Burma; Momeit, Ruby Mines (*Doherty*). Karennee, Metanja (*Fea*).—Found in the Malay Peninsula, and originally described from the Philippines.

618. **Notobitus abdominalis**, *Dist. A. M. N. H.* (7) vii, p. 13 (1901).

Head, antennæ, pronotum, scutellum, abdomen above, body beneath, and legs obscure dark olivaceous; eyes, apex of scutellum, connexivum, central macular fascia to abdomen above (neither reaching base nor apex), lateral margins of abdomen beneath, and posterior margins of third, fourth, and fifth abdominal segments ochraceous; corium, anterior and intermediate tibiæ, and the tarsi brownish-ochraceous; membrane dull ochraceous, its basal margin paler; apical joint of antennæ pale fuscous, its extreme base olivaceous; posterior femora in male with a series of irregular spines beneath, of which the largest and most prominent is situate about one-third from apex.

Length 21 to 23; breadth between pronotal angles 5 to 6 millim.

Hab. Khási and Nága Hills (*Chennell*). Burma; Karennee (*Fea*).

619. **Notobitus serripes**, *Dall.* (Nematopus) *Tr. E. S.* (2) i, p. 4, pl. ii, f. 2 (1850).

Head, pronotum, scutellum, sternum, and posterior femora dark shining olivaceous; antennæ, anterior and intermediate tibiæ ochraceous; posterior tibiæ reddish-ochraceous; corium dull brownish-ochraceous; membrane pale fuscous; posterior femora in the male moderately thickened and subgranulous, prominently spined beneath, the posterior tibiæ inwardly strongly and closely serrate; abdomen above blackish, with two small discal luteous spots; connexivum luteous, with blackish incisural spots; abdomen beneath very pale castaneous, the apex, and a fascia, sometimes absent, on each basal lateral area, dark olivaceous; the lateral margins luteous, sometimes with small incisural black spots.

Length 18 to 20; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.

Hab. Sikhim (*Ind. Mus.*); Mungphu (*Atkinson Coll.*). Assam; Khási Hills (*Chennell*), Nága Hills, Margherita (*Doherty*).

Genus CLORESMUS.

Cloresmus, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 451; *id. En. Hem* iii, p. 65 (1873).

Type, *C. signoreti*, Stål, a Javan species.

Distribution. Oriental Region and China.

This genus greatly resembles *Notobitus*, from which it is separated by the shorter rostrum, which does not quite extend to the mesosternum, or only reaches the middle of it; the apex of the prosternum is obtusely sulcate; the posterior coxæ in the males are outwardly furnished with a short spine; and the first joint of the antennæ is shorter than the second, which is also longer than the third.

620. **Cloresmus nepalensis**, *Westw.* (Nematopus) *in Hope Cat.* ii, p. 14 (1842).

Nematopus brevicornis, *Herr.-Sch. Wanz. Ins.* ix, p. 261, f. 995 (1851).

Head, pronotum, and scutellum dark shining olivaceous; corium and membrane purplish-brown; antennæ, abdomen beneath, and anterior and intermediate legs luteous; posterior legs very pale castaneous; connexivum luteous, spotted with dark olivaceous; posterior femora in the male moderately incrassated, with a

strong spine at about middle of under surface; rostrum just passing the anterior coxæ.

Length 14 to 17 millim.

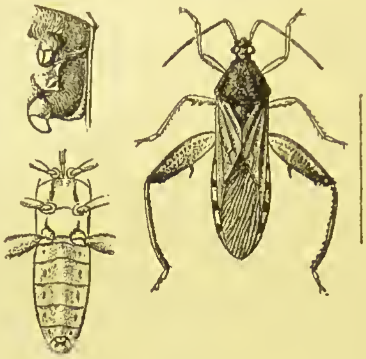

Fig. 218.—*Cloresmus nepalensis.*

Hab. Sikhim, Kurseong (*Ind. Mus.*). Khási Hills (*Chennell*). Nilgiri Hills (*Hampson*). Burma; Karennee (*Fea*). Tenasserim: Myitta (*Doherty*).

621. **Cloresmus modestus,** *Dist. A. M. N. H.* (7) vii, p. 14 (1901).

Body above brownish-ochraceous, sometimes tinged with purplish; antennæ, rostrum, a central fascia to head beneath and mesosternum, anterior and intermediate legs, posterior trochanters and tarsi, ochraceous; posterior legs and abdomen beneath reddish-brown; abdomen above purplish, sometimes pale castaneous, with three pale central ochraceous spots, one on second segment and the others at junction of third and fourth and of fourth and fifth segments; connexivum above and beneath ochraceous, spotted with black or castaneous at the incisures; membrane pale fuscous; scutellum with the apex and basal angles narrowly ochraceous; male with a very distinct spine on outer edge of posterior coxæ; rostrum extending about halfway across mesosternum; antennæ very hirsute; posterior femora in male moderately incrassated and armed with a long spine a little before middle of under surface.

Length 14 to 18 millim.

Hab. Calcutta. Sikhim (*Ind. Mus.*). Khási Hills (*Chennell*). Burma; Pegu (*Ind. Mus.*), Metanja, Karennee (*Fea*). Tenasserim; Thagata (*Fea*).

622. **Cloresmus khasianus,** *Dist. A. M. N. H.* (7) vii, p. 14 (1901).

Above pale shining olivaceous or brownish-ochraceous, with the head and anterior margin of pronotum olivaceous; antennæ with the first, second, and third joints brownish-ochraceous, with their extreme apices olivaceous, fourth joint ochraceous, its base and an

apical annulation pale fuscous; abdomen above sanguineous, with two small ochraceous linear spots at bases of fourth and fifth segments; connexivum ochraceous, with large fuscous spots at the incisures; prosternum, anterior and intermediate legs, and posterior tarsi ochraceous; meso- and metasterna, abdomen beneath, and posterior legs castaneous; lateral margins of abdomen ochraceous, minutely spotted with fuscous at the incisures; head beneath and anterior margin of prosternum shining pale olivaceous; antennæ hirsute; rostrum scarcely extending beyond the anterior coxæ; posterior coxæ of males somewhat obscurely spined; posterior femora in male moderately incrassated, with an elongate spine a little beyond middle of under surface.

Length 18 to 21 millim.

Hab. Khási Hills (*Chennell*). Sikhim; Mungphu (*Atkinson Coll.*). Burma; Karennee (*Fea*).

The following genus *Distantidea* evidently requires a fresh Division of the Coreinæ for its reception. The position of the acetabula allies it with the *Cloresmaria*, while the peculiar odoriferous processes reach the anterior margin of the metasternum, thus approaching the *Colpuraria*, with which it has much in common. The length of the rostrum, the sulcated mesosternum, and the peculiar structure of the odoriferous apertures prove its isolation from both those Divisions, and seem to point to an intermediate position between them.

Genus **DISTANTIDEA**.

Distantidea, *Kirkadly, J. Bomb. N. H. Soc.* xiv (1902).

Type, *D. vedda*, Kirkaldy.

Distribution. Ceylon.

Head long, eyes well detached from anterior margin of the pronotum; antennæ with the first joint longer than the head and shorter than the second; rostrum very long, almost reaching the apex of the abdomen in the male, a little shorter in the female; pronotum with the anterior angles prominent, the lateral angles rounded, the lateral margins sinuate and obsoletely crenulate; mesosternum centrally profoundly sulcate; posterior acetabula with their exterior margins strongly out of line with those of the preceding acetabula; membrane with the veins numerous and subreticulate.

623. **Distantidea vedda**, *Kirkaldy, J. Bomb. N. H. Soc.* xiv, pl. A, f. 13 (1902).

Ochraceous, speckled with fuscous; bases of the second and third joints of the antennæ, and a central annulation to the fourth joint, luteous; abdomen above pale sanguineous, connex-

ivum ochraceous, much speckled and largely spotted with fuscous; abdomen beneath with a lateral fuscous fascia at the area of the stigmata; rostrum reaching the apex of the sixth abdominal

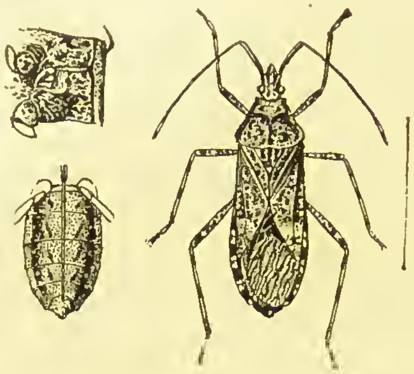

Fig. 219.—*Distantidea vedda.*

segment in the male, about the apex of the fourth in the female; membrane brownish, with the basal margin piceous.

Length 16 to 20; breadth between pronotal angles 5 to 6 millim.

Hab. Ceylon (*Green*).

Division *COLPURARIA.*

Lybantaria, *Stål, En. Hem.* iii, p. 35 (1873).

This Division differs from the *Cloresmaria* by having the posterior acetabula more profoundly detached from the posterior margin of the metasternum, their exterior margins being nearly in line with those of the preceding acetabula; the anterior angle of the odoriferous process reaches, or nearly reaches, the anterior margin of the metasternum; the first joint of the antennæ is shorter than the second, and the head is moderately produced in front of the antenniferous tubercles. In the males, at least, the abdomen is usually more or less sulcated.

Synopsis of Genera.

A. Head long, longer than breadth between eyes.
- *a.* Rostrum with first joint extending considerably beyond base of head; pronotal lateral angles not produced .... COLPURA, p. 377.
- *b.* Rostrum with the first joint about reaching base of head; pronotal lateral angles prominently produced.................... WOLFIUS, p. 379.

B. Head subquadrate, not or scarcely longer than broad.
  a. Second joint of antennæ considerably longer than third; membrane not reaching apex of abdomen .... HYGIA, p. 380.
  b. Second joint of antennæ slightly longer than third; membrane almost reaching apex of abdomen .... VITTORIUS, p. 381.

Genus COLPURA.

Lybas, *Dall. List Hem.* ii, pp. 450 & 463 (1852), *nom. præocc.*
Colpura, *Bergr. Rev. Ent. Franç.* xiii, p. 154 (1894).
Lybastes, *Kirkaldy, Entomologist,* xxxiii, p. 240 (1900).

Type, *C. obscura*, Dall.

Distribution. Oriental Region; not at present known from Indian Peninsula or Ceylon.

Head long, much longer than the breadth between eyes, the central lobe prominent and passing the lateral lobes; rostrum with the first joint extending considerably beyond the basal margin of the head; antennæ with the first joint shorter than the second, the fourth joint shorter than the third; membrane with the veins more or less furcate; abdomen more or less distinctly sulcated.

624. **Colpura obscura**, *Dall.* (Lybas) *List Hem.* ii, p. 463, pl. xiv, f. 2 (1852).

Dark dull castaneous; apex of the scutellum and a small spot near middle of apical margin of corium ochraceous; lateral margins of the abdomen, above and beneath, with ochraceous incisural spots; abdomen with a lateral segmental series of black spots, those on the last three segments being most distinct and the others sometimes obsolete; body elongate; connexivum exposed beyond middle of corium; abdomen somewhat broadly sulcated for more than half its length; rostrum brownish, extending to basal margin of the fourth abdominal segment.

Length 16 to 17; breadth between pronotal angles 5 millim.

Hab. Khási Hills (*Chennell*).—Malay Peninsula, Java, Sumatra, and Corea.

625. **Colpura erebus**, *Dist. A. M. N. H.* (7) vii, p. 18 (1901).

Very dark castaneous; apical joint of antennæ (excluding base), eyes, apex of scutellum, a small discal spot on corium near posterior margin, linear lateral spots to abdomen above and beneath, posterior margins of fourth and fifth abdominal segments, and the coxæ, ochraceous; femora much suffused with ochraceous; antennæ with the first joint thickened and slightly curved, second and third joints slender, second longest, fourth cylindrical, shorter than third; pronotum with the anterior angles moderately and distinctly prominent, anterior margin concavely sinuate, lateral margins nearly straight and distinctly reflexed; anterior area bilobately impressed; abdomen broader than corium and projecting from

about half its length to apex; connexivum recurved, membrane not quite reaching apex of abdomen, which beneath is broadly and distinctly sulcated; rostrum reaching the apex of the third abdominal segment.

Length 11 to 15; breadth between pronotal angles $3\frac{1}{2}$ to $4\frac{1}{2}$ millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*). Nága Hills (*Doherty*).

626. **Colpura funebris,** *Dist. A. M. N. H.* (7) vii, p. 16 (1901).

Piceous, finely ochraceously pubescent; apical joint of antennæ (excluding base), apex of scutellum, linear marginal spots to abdomen above and beneath, trochanters, tarsi, and posterior margins of fourth and fifth abdominal segments ochraceous: membrane dark cupreous, with its inner area brownish-ochraceous; corium with a large dull piceous spot near claval apex: body beneath piceous; abdomen with four basal spots (sometimes obsolete), the stigmata, and a sublateral series of spots, of which the last three are the largest and most distinct, shining black; posterior and intermediate femora more or less suffused with ochraceous above; antennæ with the basal joint stoutest and curved, second and third joints slender, second much longer than third, fourth cylindrical and shortest, not much more than half the length of third; pronotum with the anterior angles rounded; abdomen moderately dilated and recurved, projecting beyond the corium for about half its length; rostrum about reaching the centre of third abdominal segment; abdomen prominently sulcated for about half its length.

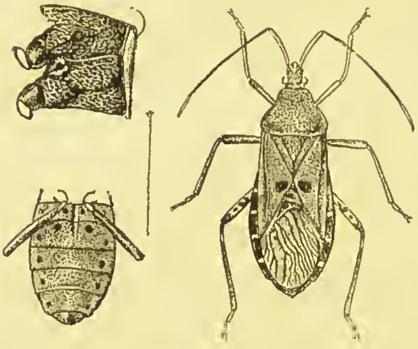

Fig. 220.—*Colpura funebris.*

Length 15; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Sikhim (*Atkinson Coll.*). Assam (*Coll. Dist.*).

627. **Colpura noctua,** *Dist. A. M. N. H.* (7) vii, p. 18 (1901).

Piceous; apical joint of antennæ (excluding base), coxæ, extreme bases of femora, rostrum, posterior margins of fourth and fifth abdominal segments, spots to lateral margins of abdomen above and beneath ochraceous; tibiæ and tarsi obscure brownish-ochraceous; rostrum reaching the centre of the third abdominal segment; antennæ with the basal joint thickened and curved, second and third joints longest and slender, second longer than third, fourth cylindrical and shortest; pronotum with the anterior angles distinctly spined, lateral margins straight, not sinuate, posterior margin moderately sinuate at base of scutellum, a distinct subfoveate, subbasal, transverse impression, and the

lateral angles subprominent and rounded; fourth, fifth, and sixth abdominal segments with very distinct rounded black spots near the lateral margins; body somewhat coarsely punctate; abdomen above purplish.

Length 11 to 12; breadth between pronotal angles $3\frac{1}{2}$ to 4 millim.

Hab. Assam; Margherita (*Doherty*). Burma (*Gianelli*).—Java (*Horsfield*).

628. **Colpura nodulosa**, *Dist.* (Lybas) *Ent. Month. Mag.* xxv, p. 231 (1889).

Above very dark castaneous or brownish-ochraceous; body beneath and legs darker in hue; apical joint of antennæ (excluding base) and apex of scutellum luteous; coxæ, rostrum, tarsi, and sometimes irregular annulations to posterior femora, ochraceous; pronotum with the lateral angles distinctly subnodulose; abdomen with marginal, ochraceous, incisural spots, and with a lateral series of black segmental spots, of which those on the last three segments are largest and most distinct; rostrum passing the posterior coxæ.

Length 8 to 10; breadth between pronotal angles 3 to $3\frac{1}{2}$ millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*). Khási Hills (*Chennell*). Burma; Karennee (*Fea*); Tenasserim; Meetan (*Fea*).

Genus **WOLFIUS**, nov.

Type, *W. exemplificatus*, Dist.
Distribution. Tenasserim.

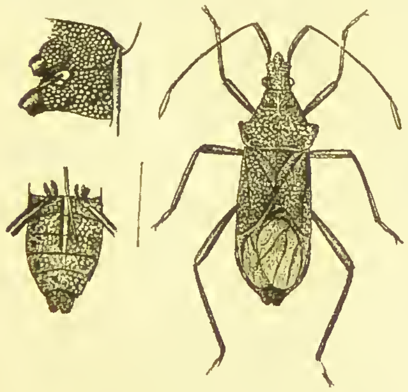

Fig. 221.—*Wolfius exemplificatus.*

Head long, about as long as basal joint of antennæ or a little longer; eyes placed on the lateral margins of the head; pronotum with the lateral angles prominently and somewhat upwardly produced; membrane not reaching the apex of the abdomen, with a very few prominent longitudinal veins; rostrum with the basal joint about reaching base of head, apex reaching anterior margin of fourth abdominal segment; antennæ with the second joint very much longer than third, fourth joint shortest; abdomen centrally sulcate for about half its length from base.

629. **Wolfius exemplificatus**, sp. n.

Very dark chocolate-brown, thickly covered with small greyish points; membrane pale brownish-ochraceous, the veins and basal angle chocolate-brown; rostrum, tibiæ, and tarsi brownish; apical joint of antennæ stramineous, its base fuscous; abdomen with the stigmata forming a lateral segmental series of spots on each side, black; pronotal angles prominently obtusely angulately and broadly produced.

Length 9; breadth between pronotal angles 3 millim.

Hab. Tenasserim; Thagata (*Fea*).

Genus **HYGIA**.

Pachycephalus, *Uhler, Proc. Ac. N. S. Phil.* 1860, p. 225, *nom. præocc.*

Hygia, *Uhler, op. cit.* 1861, p. 287.

Type, *H. opaca*, Uhler, from China and Japan.

Distribution. Sikhim, China, and Japan.

Head subquadrate; first joint of rostrum reaching basal margin of head; second joint of antennæ considerably longer than the third; membrane not nearly reaching the apex of the abdomen, the veins strongly or slightly reticulate; ocelli wide apart, somewhat in a line with the posterior margins of the eyes; pronotum with the anterior angles prominent, the lateral angles rounded and subnodulose; the lateral margins moderately sinuate.

630. **Hygia touchei**, *Dist.* (Pachycephalus) *A. M. N. H.* (7) vii, p. 19 (1901).

Piceous brown, coarsely punctate; connexivum above and beneath with linear spots at incisures, some irregular spots to femora, and subbasal and subapical annulations to tibiæ, ochraceous; apical joint of antennæ (excluding base) luteous; rostrum just passing the posterior coxæ; abdomen beneath with four central basal spots, and a spot on the lateral area of each of the last three segments, black.

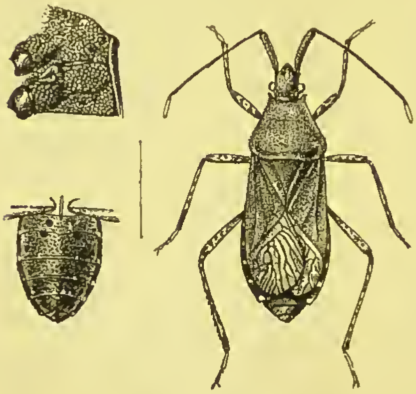

Fig. 222.—*Hygia touchei.*

Length 9 to 11; breadth between pronotal angles 3 to 3½ millim.

Hab. Sikhim (*Coll. Dist.*). Originally described from China.

This species differs principally from *H. opaca*, the type of the genus, by having the veins of the membrane very much less reticulate.

Genus VITTORIUS, nov.

Type. *V. adspersus*, Dist.
Distribution. Burma.

Allied to *Hygia*, Uhler, by the shape of the head and general structure and appearance, but differing from that genus by having the veins of the membrane not reticulate but longitudinal and slightly furcate; second joint of antennæ slightly, but not considerably, longer than the third; first joint of rostrum reaching basal margin of head; apex extending to, or a little beyond, the posterior coxæ; membrane almost reaching apex of abdomen; ocelli wide apart, somewhat in a line with the posterior margins of the eyes; pronotum with the anterior angles obtusely but distinctly prominent, the lateral angles slightly prominent and rounded, the lateral margins moderately sinuate; connexivum freely exposed beyond middle; abdomen not sulcated.

631. **Vittorius adspersus**, sp. n.

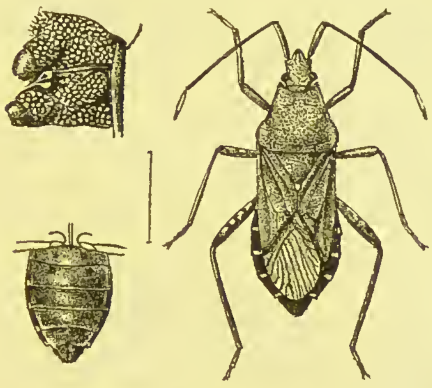
Fig. 223.—*Vittorius adspersus.*

Very dark chocolate-brown, thickly covered with small greyish points; apex of scutellum, incisural spots to connexivum above and beneath, coxæ, large and irregular spots to posterior femora, obscure annulations to tibiæ, and basal margins of fourth and fifth abdominal segments, ochraceous; tibiæ brownish-ochraceous; apical joint of antennæ stramineous, its base black and its apex brownish; antennæ with the basal joint stoutest, slightly longer than the head, second joint a little longer than the third, fourth shorter than first; abdomen with a lateral segmental series of black spots on each side.

Length 11; breadth between pronotal angles $3\frac{1}{2}$ millim.

Hab. Burma; Karennee (*Fea*).

Division *ANISOSCELARIA.*

Anisoscelaria, *Stål, En. Hem.* iii, p. 35 (1873).

This Division, which is mainly composed of Neotropical genera and species, and may be regarded as only represented by stragglers in the other zoo-geographical regions, is distinguished by the longly produced head in front of the antenniferous tubercles, and by the length of the posterior femora, which reach

the abdominal apex or extend beyond.—Only one genus, containing a single species, is at present recorded from British India.

Genus LEPTOGLOSSUS.

Leptoglossus, *Guér. Voy. Coq., Zool.* ii, pt. 2, p. 174 (1830); *Stål, En. Hem.* i, p. 160 (1870).
Anisoscelis, *Spin. Ess. Hem.* p. 200 (1837).
Theognis, *Stål, Stett. ent. Zeit.* xxiii, p. 294 (1862).

Type, *L. dilaticollis*, Guér., from Brazil.

Distribution. A large Neotropical genus, represented in the Ethiopian, Oriental, and Australasian Regions.

Head long, produced in front of the antenniferous tubercles, eyes inserted at about one-third from base; pronotum broader than long, the lateral angles prominent or spinously produced; posterior femora long, spinous, their apices reaching or passing the apex of the abdomen; posterior tibiæ more or less dilated on each side, most prominently on the outer margin; rostrum somewhat long, basal joint passing the basal margin of head.

632. **Leptoglossus membranaceus,** *Fabr.* (Cimex) *Spec.* ii, p. 351. 79 (1781); *id.* (Lygæus) *Ent. Syst.* iv, p. 139. 16 (1794); *Burm.* (Anisoscelis) *Handb.* ii, p. 332 (1835); *Stål* (Theognis), *Hem. Afr.* ii, p. 86. 1 (1865).
Cimex mormodicæ, *Forst. Descr. An.* p. 16 (1844).
Anisoscelis orientalis, *Dall. List Hem.* ii, p. 454 (1852); *Kirby* (Anisomelis), *J. Linn. Soc., Zool.* xxiv, p. 92 (1891).
Anisoscelis flavopunctatus, *Sign. in Maillard, Notes sur l'île de la Réun., Annexe J*, p. 27, pl. xxi, f. 4 (1863).
Stoll, Pun. f. 73.

Fig. 224.—*Leptoglossus membranaceus.*

Dark chocolate-brown; a central fascia on the head and a lateral fascia behind each eye, an arcuated fascia crossing anterior area of pronotum, apex of scutellum, a small spot on disk of corium, and two small spots on posterior tibiæ, dark ochraceous: body beneath thickly spotted with reddish-ochraceous, the lateral areas of head and a sublateral fascia to prosternum of the same colour; an obscure central annulation to second joint of antennæ, a more distinct annulation to third joint, fourth joint (excluding base), and the anterior and intermediate tibiæ and

tarsi brownish-ochraceous; basal joint of antennæ about as long as head, second and fourth joints subequal in length, longer than third; posterior femora prominently spined on inner margin, less prominently spined on outer margin; posterior tibiæ strongly dilated for more than half their length, broadest at outer margin, the edge of which is sharply tridentate, inner margin sinuate and centrally dentate.

Length 19 to 22; breadth between pronotal angles 7 millim.

Hab. Khási Hills (*Chennell*). Ceylon (*Green*). Andaman Islands; Port Blair (*Meldola*). Nicobar Islands; Camorta (*Coll. Dist.*). Burma; Karennee (*Fea*). Tenasserim; Myitta (*Doherty*).—Scattered throughout the Malayan Archipelago to Australasia, and somewhat common in Tropical and Southern Africa.

Division *PHYSOMERARIA.*

Physomeraria, *Stål, En. Hem.* iii, p. 36 (1873).

This Division differs from the *Anisoscelaria* by not having the head longly produced in front of the antenniferous tubercles; the apices of the posterior femora do not reach the abdominal apex; the posterior femora are distinctly incrassated and more or less distinctly spinous or tuberculate.—The *Physomeraria* are confined to the Ethiopian and Oriental Regions.

Synopsis of Genera.

A. Claval suture about as long as apical margin of corium .... PHYSOMERUS, p. 383.

B. Claval suture a little longer than apical margin of corium.

a. Mesosternum sulcated .... PETALOCNEMIS, p. 386.

b. Mesosternum not sulcated .... ACANTHOCORIS, p. 385.

Genus PHYSOMERUS.

Physomerus, *Burm.* (part.) *Handb.* ii, p. 341 (1835); *Amy. & Serv. Hém.* p. 196 (1843); *Stål, Hem. Afr.* ii, p. 3 (1865).

Type, *P. grossipes*, Fabr.

Distribution. Oriental Region.

Pronotum with the posterior margin in front of the scutellum truncate; fourth joint of the antennæ very little shorter than the third; anterior area of the head impressed on each side of the central lobe; mesosternum centrally sulcate; apical margin of the corium straight or obsoletely sinuate; claval suture about as long as the apical margin of corium; veins of membrane longitudinal, not reticulate.

633. **Physomerus grossipes**, *Fabr.* (Lygæus) *Ent. Syst.* iv, p. 135 (1794); *Burm. Handb.* ii, p. 341 (1835); *Stål, Hem. Fabr.* i, p. 45. 2 (1868).

Lygæus calcar, *Fabr. Syst. Rhyng.* p. 214 (1803); *Herr.-Sch.* (Physomerus) *Wanz. Ins.* vi, p. 60, f. 621 (1842).
Coreus (Cerbus) œdymerus, *Burm. Nov. Act. Ac. Leop.* xvi, *Suppl.* p. 296 (1834).
Physomerus delineatus, *Walk. Cat. Het.* iv, p. 59 (1871).

Brownish-ochraceous, pilose; a central line to head and pronotum, margins and veins of corium, body beneath, and legs pale ochraceous; a subapical annulation to posterior femora, basal and apical areas of posterior tibiæ, and the tarsi fuscous; antennæ fuscous, finely hirsute; posterior tibiæ strongly incrassated, finely longitudinally tuberculate on upper and outer areas, very obtusely spinous beneath; posterior tibiæ with a somewhat long spine at about centre of inner margin, followed by a shorter spine, and thence finely serrate to apex: body beneath with scattered fine tuberculous points, and the stigmata, black; rostrum reaching the intermediate coxæ.

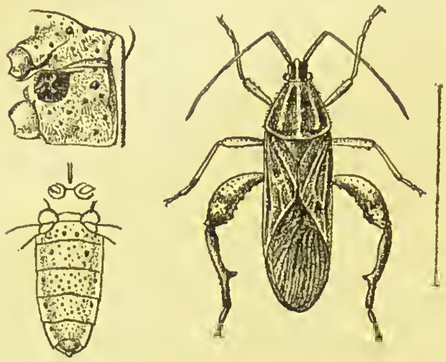

Fig. 225.—*Physomerus grossipes.*

Length 20 to 24; breadth between pronotal angles $5\frac{1}{2}$ to $6\frac{1}{2}$ millim.

Hab. Bengal; Calcutta, Moorshedabad (*Ind. Mus.*). Sikhim. Assam; Margherita (*Atkinson Coll.*), Khási Hills (*Chennell*). Bombay (*Leith*). Ceylon (*Dohrn*). Nicobar Islands, Camorta (*Coll. Dist.*). Burma; Metanja, Palon (*Fea*).—Generally distributed throughout the Malayan Archipelago.

In the form *P. œdymerus*, Burm., the colour of the legs is usually fuscous, and this was considered a distinct species by Stål and others, and as of a strictly Malayan habitat. This variety occurs, however, throughout the whole range of the species.

634. **Physomerus parvulus,** *Dall. List Hem.* ii, p. 413 (1852).

Head and pronotum ochraceous, corium brownish-ochraceous; head with two discal black fasciæ; pronotum with the lateral margins, and two central fasciæ which do not reach anterior margin, black; scutellum black, with a central longitudinal line and the margins brownish-ochraceous; clavus fuscous; corium more or less suffused with fuscous; membrane piceous: body beneath and legs pale ochraceous; posterior femora with the apex and a broad subcentral annulation fuscous; posterior tibiæ with the base and apex, and all the tarsi, fuscous; antennæ black; body beneath with small scattered tuberculous points.

Length 19 to 21; breadth between pronotal angles $5\frac{1}{2}$ to 6 millim.

Hab. Burma; Karen Hills (*Coll. Dist.*). Tenasserim; Houngdaran (*Fea*); Mergui; Tavoy (*Ind. Mus.*).—I also possess specimens from the Malay Peninsula, Java, and Sumatra.

Genus ACANTHOCORIS.

Acanthocoris, *Amy. & Serv. Hém.* p. 213 (1843); *Stål, En. Hem.* iii, p. 70 (1873).

Type, *A. scabrator*, Fabr.

Distribution. Ethiopian, Oriental, and Eastern Palæarctic Regions.

Claval suture a little longer than the apical margin of the corium; fourth joint of the antennæ shorter than the third; eyes small; posterior tibiæ moderately dilated; posterior femora incrassated, their apices above with a short spine or tubercle; corium with the basal margins parallel, not rounded; mesosternum not sulcated.

635. **Acanthocoris scabrator,** *Fabr.* (Coreus) *Syst. Rhyng.* p. 195. 19 (1803); *Burm.* (Crinocerus) *Handb.* ii, p. 319 (1835); *Amy. & Serv. Hém.* p. 214 (1843).

Crinocerus scabripes, *Herr.-Sch. Wanz. Ins.* vi, p. 18, f. 574 (1842).

Fuscous or brown, with numerous brownish-ochraceous points and suffusions; antennæ hirsute, the apical joint ochraceous with its base fuscous; pronotum with the lateral angles acutely produced, their anterior margins serrate; corium with the basal lateral margin spinously hirsute, and with a very obscure paler spot or suffusion on apical area; connexivum with ochraceous transverse spots at the incisures; membrane piceous: body beneath in female ochraceous, speckled with brown; femora fuscous, the tibiæ brownish or castaneous, with a pale annulation near base; in the male the body beneath and legs are much darker; posterior femora moderately incrassated, toothed or serrate on inner margin; rostrum reaching the intermediate coxæ.

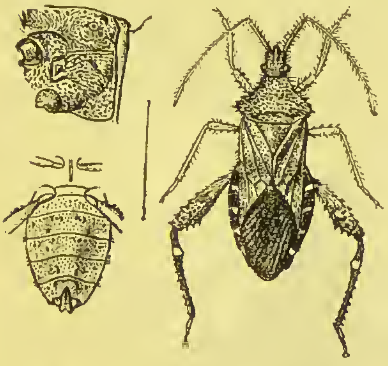

Fig. 226.—*Acanthocoris scabrator.*

Length 13 to $14\frac{1}{2}$; breadth between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. Sikhim (*Ind. Mus.*). Assam; Khási Hills (*Chennell*),

Margherita (*Ind. Mus.*). Bombay (*Leith*). Bangalore (*Cameron*). Ceylon (*Parry*, *Brit. Mus.*). Burma; Karennce (*Fea*). Tenasserim; Myitta (*Doherty*).—Also found on many islands of the Malayan Archipelago.

636. **Acanthocoris anticus,** *Walk. Cat. Het.* iv, p. 118 (1871).
Crinocerus ponderosus, *Walk. in Tennent's Nat. Hist. Ceyl.* p. 463 (1861), ined.

Very dark brown; antennæ hirsute, third joint luteous at base, fourth joint luteous; generally resembling *A. scabrator*, but with the pronotal angles much broader and less acute; luteous spots to connexivum smaller and more obsolete; second joint of the antennæ scarcely longer than the first joint.

Length 14; breadth between pronotal angles 5 millim.

Hab. Ceylon (*Green*).

Genus **PETALOCNEMIS.**

Petalocnemis, *Stål, Öfv. Vet.-Ak. Förh.* 1853, p. 259; *id. En. Hem.* iii, p. 70 (1873).

Type, *P. pachycera*, Stål, an African species.

Distribution. Ethiopian and Oriental Regions.

This genus is closely allied to *Acanthocoris*, from which it differs by having the lateral margins of the corium more perceptibly rounded, and by the distinct sulcation of the mesosternum.

This genus is practically Ethiopian in distribution, only one species being known from the Oriental Region.

637. **Petalocnemis obscura,** *Dall.* (Acanthocoris) *List Hem.* ii, p. 518 (1852).

Obscure brownish-ochraceous, clothed with short hairs; the

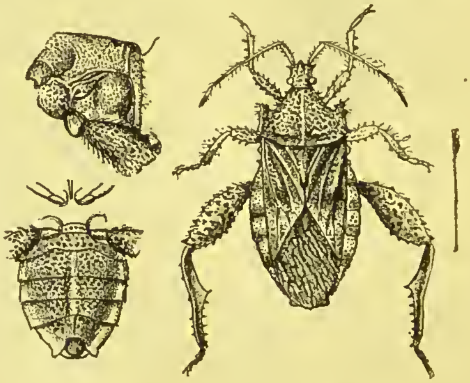

Fig. 227.—*Petalocnemis obscura.*

pronotal angles broadly truncate; head and pronotum with a

distinct central pale carinate line, the surface of the pronotum more or less rugulose; corium with spinous hairs on the anterior lateral margin, and with a very obscure ochraceous patch or spot on apical area; connexivum with obscure transverse ochraceous spots at the incisures: body beneath and legs paler than above; posterior femora incrassated, with a double series of tubercles on the outer margin and more indistinctly tuberculate on the inner area; anterior tibiæ compressed, somewhat dilated, with a double series of spinous tubercles on outer margin, intermediate tibiæ tuberculate externally; posterior tibiæ inwardly dilated and distinctly angulate near middle, thence prominently dentate to apex; anterior and intermediate femora prominently tuberculate; antennæ hirsute, the first, second, and third joints concolorous with the body, apices of second and third joints black, apical joint brownish-ochraceous, its base paler.

Length 13 to $14\frac{1}{2}$; breadth between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. North Bengal (*Campbell, Brit. Mus.*). Khási Hills (*Chennell*). Bombay (*Brit. Mus.*). Poona (*Coll. Dist.*). Ceylon (*Green*).

Division *PENDULINARIA*.

Pendulinaria, *Stål, En. Hem.* iii, p. 36 (1873).

Posterior femora not incrassated, and tibiæ above distinctly sulcated. These characters alone will separate the division from the *Physomeraria*. The abdominal spiracles are placed before the middle of the segment.

The Division *Pendulinaria* is small, consisting of three genera, two of which are apparently confined to the Australasian Region.

Genus **PENDULINUS**.

Pendulinus, *Thunb.* (part.) *Hemip. rostr. Cap.* iv, p. 5 (1822); *Stål, En. Hem.* iii, p. 73 (1873).
Dasynus, *Burm. Nov. Act. Ac. Leop.* xvi, *Suppl.* p. 297 (1834).
Galæsus, *Dall. List Hem.* ii. pp. 438 & 440 (1852).
Theraptus, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 462.
Odontoparia, *Mayr, Verh. z.-b. Ges. Wien,* xv. p. 433 (1865).

Type, *P. hasticornis*, Thunb., a South-African species.

Distribution. Ethiopian and Oriental Regions.

Head subquadrate, somewhat distinctly produced between the antenniferous tubercles; ocelli small and placed somewhat far apart; antennæ with the first and second joints subequal in length, or first longer than the second, third joint (in some African species) dilated towards the apex into a broad flat process; rostrum variable in length, reaching or passing the intermediate

coxæ; scutellum either a little longer than broad, or equilateral; corium with the apical margin a little sinuate, and its apical angle distinctly produced; abdominal spiracles placed before the middle of the segments.

This is a genus exhibiting considerable variation in structure; it has been divided, but the divisions are now estimated as of only subgeneric value, in this respect resembling those of the genus *Homœocerus*. With the last-named genus species of *Pendulinus* are easily confounded, when the structure of the head is not sufficiently studied.

638. **Pendulinus orientalis**, *Dist. Ent. Month. Mag.* xxv. p. 231 (1889).

Dull ochraceous; basal margin of head, lateral margins of pronotum, and antennæ black; body beneath paler ochraceous, sternal sutures and a sublateral transverse line on each abdominal segment black; eyes, extreme base of antennæ, and legs pale reddish; tibiæ more or less infuscated; abdomen above sanguineous; antennæ with the first and second joints about subequal in length, third much shorter than second and about subequal to fourth; head projecting slightly in front of the antenniferous tubercles; pronotum thickly and coarsely punctate; the head and margins of the corium tinged with red; scutellum rugulose and tinged with red, the margins and apex levigate and ochraceous; corium somewhat thickly and coarsely punctate; membrane piceous, somewhat shining, its inner angle opaque; rostrum reddish, its extreme apex black and about reaching the intermediate coxæ.

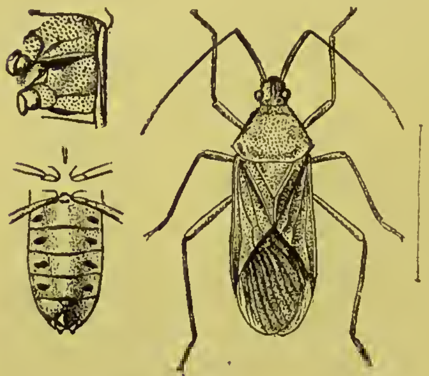

Fig. 228.—*Pendulinus orientalis.*

Length 16 to 18; breadth between pronotal angles 5 to $5\frac{1}{4}$ millim.

Hab. Sikhim (*Ind. Mus.*). Assam; Khási Hills (*Chennell*), Margherita (*Doherty*). Tenasserim (*Coll. Dist.*).

639. **Pendulinus nicobarensis**, *Mayr* (Odontoparia), *Verh. z.-b. Ges. Wien*, p. 433 (1865); *id. Reise Nov., Hem.* p. 98, f. 22 (1866).

Ochraceous, nearly glabrous; antennæ reddish, apices of the

first, second, and third joints, and the apical joint black, the last with its base whitish; pronotum cinnamomeous, lateral and posterior margins black; corium obscure cinnamomeous, before apex with a flavous vitta; membrane cupreous; abdomen above sanguineous, its apex black; pronotum, scutellum, sternum, and corium coarsely punctate; abdomen finely rugulose and punctate.

Length 13 to 14 millim.

Hab. Nicobar Islands; Sambelong.

I have not seen this species.

640. **Pendulinus antennatus,** *Kirby* (Homœocerus), *J. Linn. Soc., Zool.* xxiv, p. 90, pl. iv, f. 6 (1891).

"Head and front of pronotum rufo-testaceous, hinder part of pronotum, scutellum, and corium with the ground-colour paler, but so thickly speckled and reticulated with black as to look darker. Antennæ with joints one and four of equal length, the second only slightly shorter, and the third about half as long as the first; reddish brown at the base, shading into black about the middle of the second joint; extreme base of the second joint, a ring at the base of the third, and a much broader one just beyond the base of the fourth, pale yellow. Lateral angles of the pronotum hardly prominent; lateral margins with a black line; the front of the prothorax with two black dots on each side of the pale median line, conspicuous under a strong lens. Towards the hinder part of the pronotum the punctures are much larger and darker, and are arranged in irregular undulating transverse lines. Scutellum and corium thickly punctured with black, the punctures along the nervures arranged in lines; edges of the scutellum and corium narrowly testaceous, and the tip of the scutellum bone-colour. Membrane fuscous, black at the base. Under surface rufo-testaceous; pectus with the punctures unicolorous; ventral surface of abdomen hardly punctured, the stigmata marked with black dots." (*Kirby.*)

Length 13 millim.

Hab. Ceylon (*Green*).

Division *GONOCERARIA.*

Gonoceraria, *Stål, En. Hem.* iii, p. 36 (1873).

In this Division the abdominal spiracles are much nearer to the lateral than to the apical margins of the segments, and from the basal and apical margins generally almost equally remote; a character which alone will serve to separate the *Gonoceraria* from the *Pendulinaria.*

The *Gonoceraria* comprise but a few genera, are principally represented in the Ethiopian and Oriental Regions, and just extend into Australasia. *Gonocerus* is a well-known Palæarctic genus.

Synopsis of Genera.

A. Head distinctly produced in front of antenniferous tubercles.
  a. Fourth joint of antennæ not shorter than third.
    a. Abdominal spiracles near but not close to lateral margins . . . . PLINACHTUS, p. 390.
  b. Fourth joint of antennæ shorter than the third.
    b. Abdominal spiracles close to lateral margin . . . . BRUNSELLIUS, p. 391.
B. Head not distinctly produced in front of antenniferous tubercles.
  c. Abdominal segmental angles not exteriorly acutely produced . . . . CLETUS, p. 392.
  d. Abdominal segmental angles exteriorly acutely produced . . . . CLETOMORPHA, p. 396.

Genus PLINACHTUS.

Plinachtus, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 470; *id. En. Hem.* iii, p. 75 (1873).

Type, *P. spinosus*, Stål, a South-African species.

Distribution. Ethiopian and Oriental Regions; also recorded from Japan.

Head distinctly produced in front of the antenniferous tubercles: antennæ with the fourth joint not shorter than the third, basal joint moderately incrassated, much longer than the head; pronotum

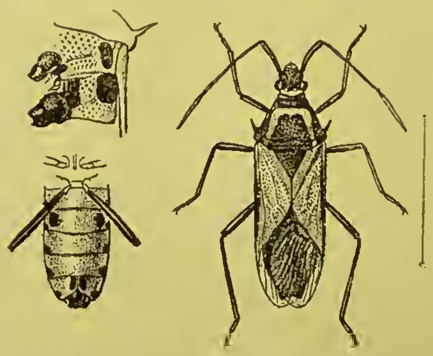

Fig. 229.—*Plinachtus acicularis.*

with the lateral angles usually produced into short acute spines slightly directed forward; abdominal spiracles about equidistant from the basal and apical segmental margins or nearer apical margin, but much nearer to their lateral margins.

641. **Plinachtus acicularis**, *Fabr.* (Alydus) *Syst. Rhyng.* p. 251 (1803): *Stål, Hem. Fabr.* i, p. 62 (1868).
Anisoscelis rufiventris, *Dall. Tr. E. S.* 1850, p. 5.
Leptoscelis ventralis, *Dall. List Hem.* ii, p. 458 (1852).
Cletus conspicuus, *Walk. Cat. Het.* iv, p. 198. 47 (1871).

Head, antennæ, and scutellum violaceous-black; pronotum reddish-ochraceous, the anterior and sublateral margins, lateral spines, and a large subconical spot at base violaceous-black; basal margin of head and corium luteous or reddish-ochraceous, anterior-lateral margin of corium pale sanguineous, the posterior margin is sometimes violaceous-black; membrane brassy-black, its apical margin obscure hyaline: body beneath sanguineous; head, three lateral spots to sternum, coxæ, coxal spots, lateral abdominal spots, legs, rostrum, and apex of abdomen violaceous-black; base of rostrum stramineous.

Length 12 to 17; breadth between pronotal angles 4 to 5 millim.

Hab. Bhutan (*Dallas*). Bombay (*Leith*). Ceylon (*Green & Lewis*).

642. **Plinachtus basalis**, *Westw.* (Coreus) *in Hope Cat.* ii, p. 24 (1842); *Dist. P. Z. S.* 1901, p. 330.
Plinachtus peltastes, *Stål, Stett. ent. Zeit.* xxii, p. 144 (1861); *Kirby, J. Linn. Soc., Zool.* xxiv, p. 93 (1891).

Ochraceous; membrane fuliginous, its base piceous; pronotum coarsely punctate, with the lateral margins finely speckled with black and with a central levigate longitudinal line; lateral angles acutely spinous, the spines moderately directed upward and forward; scutellum and corium thickly punctate; sternum with a black spot on the lateral area of each segment, a series of black spots on each lateral area of the abdomen; sternum very coarsely punctate; abdomen very finely and obscurely punctate; basal joint of antennæ very finely speckled with brownish; apical joint fuscous with its base luteous.

Length 14 to 17; breadth between pronotal angles 5 to 6 millim.

Hab. Bombay (*Leith*). Nilgiri Hills (*Hampson*). Bangalore (*Ind. Mus.*). Ceylon (*Green*). Burma; Teinzo; Karennee (*Fea*).

Genus **BRUNSELLIUS**, nov.

Type, *B. smecticus*, Dist.

Distribution. Burma.

Head distinctly produced in front of the antenniferous tubercles; antennæ with the fourth joint shorter than the third, basal joint much longer than the head, first, second, and third joints subequal in length; rostrum passing the intermediate coxæ, first joint about reaching base of head; abdominal spiracles very near lateral margins; pronotum with the lateral margins moderately produced and spinous.

643. **Brunsellius smecticus**, *Dist.* (Homœocerus) *A. M. N. H.* (7) vii, p. 11 (1901).

Ochraceous, thickly, coarsely, and darkly punctate; antennæ fuscous, the apical joint luteous; pronotum with a central pale levigate line, the extreme lateral margins and angles piceous; abdomen black, the connexivum, apical margin, and two transverse spots on disk ochraceous; body beneath and legs ochraceous; abdomen with a series of black segmental spots on each lateral area; antennæ with the first and fourth joints moderately incrassated; first, second, and third joints almost subequal in length, fourth shortest; lateral angles of the pronotum produced into very small obtuse spines; rostrum with the third joint shorter than the fourth.

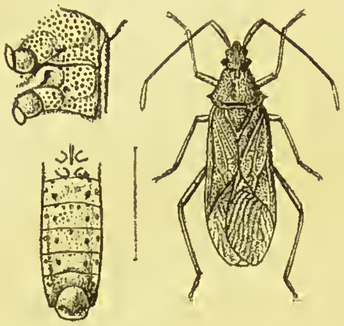
Fig. 230.—*Brunsellius smecticus.*

Length 13; breadth between pronotal angles 4 millim.

Hab. Burma; Ruby Mines (*Doherty*).

Genus CLETUS.

Cletus, *Stål, Freg. Eug. Resa, Ins. Hem.* p. 236 (1859); *Mayr, Reise Nov., Hem.* p. 118 (1866); *Stål, En. Hem.* iii, p. 75 (1873).

Type, *C. trigonus*, Thunb.

Distribution. Principally in the Oriental and Ethiopian Regions; but also represented in the Nearctic and Australasian Regions.

Body oblong, subcompressed; head subquadrate, not prominently or distinctly prodnced in front of the antenniferous tubercles, its apex deflected; anterior lateral margin of the corium and lateral margins of the abdomen very minutely crenulate or serrulate; lateral angles of the pronotnm acutely produced.

644. **Cletus punctulatus**, *Westw.* (Coreus) *in Hope Cat.* ii, p. 23 (1842).
Cletus femoralis, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 94 (1891).

Ochraceons, thickly covered with dark castaneous punctures; head and anterior half of pronotum paler; lateral margins of head and corium, connexivum, a small spot near inner apical margin of corium, body beneath, and legs, ochraceous; a spot on lateral area of each segment of the sternum and some central spots to same, and a number of discal spots to abdomen, black; antennæ with the basal joint reddish-ochraceons, second joint

castaneous or fuscous, third and fourth joints ochraceous, extreme base of apical joint infuscated; rostrum about reaching posterior

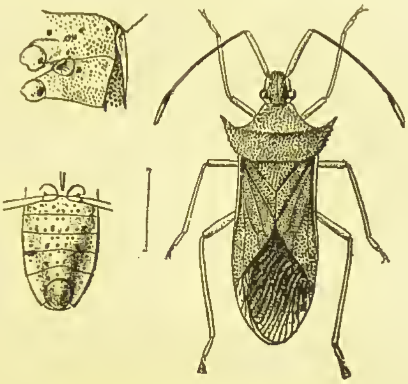

Fig. 231.—*Cletus punctulatus.*

coxæ, its apex black; membrane pale fuliginous; abdomen above, excluding margins, black; pronotal angles widely and acutely produced.

Length 9 to 10; breadth between pronotal angles 4½ to 5 millim.

Hab. Sikhim; Kurseong (*Ind. Mus.*). Khási Hills (*Chennell*); Nága Hills (*Doherty*).

645. **Cletus bipunctatus**, *Westw.* (Coreus) *in Hope Cat.* ii, p. 23 (1842).
Cletus signatus, *Walk.* (part.) *Cat. Het.* iv, p. 194. 39 (1871).
Cletus inconspicuus, *Walk. loc. cit.* p. 195. 42 (1871).

Pale ochraceous, thickly and somewhat darkly punctate; posterior area of the pronotum and the corium somewhat roseate; lateral margins of the corium and a small spot on its inner apical margin pale luteous; abdomen above ochraceous, with transverse black markings, principally on its basal area, the connexivum pale luteous: body beneath and legs luteous, a small spot on the lateral area of each sternal segment and a few small discal spots to abdomen black; antennæ pale reddish-ochraceous, the apical joint fuscous; membrane pale fuliginous; pronotal lateral angles shortly but acutely produced, the apices of the spines fuscous.

Length 9 to 10; breadth between pronotal angles 3½ to 4 millim.

Hab. Bombay (*Leith*); Calcutta (*Ind. Mus.*); Bangalore (*Cameron*). Ceylon (*Green*). Burma; Bhamo (*Fea*).

646. **Cletus punctiger**, *Dall.* (Gonocerus) *List Hem.* ii, p. 494 (1852); var., *Dist. Sec. Yarkand Miss., Rhynch.* p. 8 (1879).
Homœocerus minax, *Walk. Cat. Het.* iv, p. 99. 26 (1871).

Ochraceous, thickly covered with brown punctures; pronotum with the lateral angles acutely spinous and more produced than in

C. bipunctatus, the spines black; corium with the lateral margin and a small spot in the inner apical angle whitish; membrane pale brownish, piceous at base; abdomen above red, with the lateral margins very pale luteous: body beneath and legs pale ochraceous; sternum coarsely punctate, with a small black spot on the lateral area of each segment; abdomen with a number of small scattered discal black spots; antennæ dark ochraceous, with the apical joint fuscous.

Length 10 to 12; breadth between pronotal angles 5 to $5\frac{1}{2}$ millim.

Hab. Murree (*Stoliczka*). Calcutta (*Ind. Mus.*). Pegu; Tikekyee (*Fea*).—Originally described from China.

647. **Cletus trigonus**, *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 37 (1783): *Stål, Freg. Eug. Resa, Ins. Hem.* p. 237 (1859).
Cimex pugnator, *Fabr. Mant.* ii, p. 287 (1787); *Stål* (Cletus), *Hem. Fabr.* i, p. 60 (1868).
Gonocerus acutus, *Dall. List Hem.* ii, p. 495 (1852).
Cletus bistillatus, *Dohrn, Stett. ent. Zeit.* xxi, p. 403 (1860).

Ochraceous, thickly punctate; posterior area of the pronotum, scutellum and corium brownish; two small blackish spots on anterior area of pronotum; lateral pronotal angles strongly spinously and straightly produced, their apices black, their posterior margins crenulate; a spot near inner apical angle of corium pale ochraceous: body beneath and legs pale ochraceous; a small spot on each lateral area of the sternal segments and some scattered discal abdominal spots black.

Length 8; breadth between pronotal angles $4\frac{1}{2}$ to 5 millim.

Hab. Bengal; Ceylon (*vide Stål*).—Also received from North Borneo and the Philippines.

648. **Cletus rubidiventris**, *Westw.* (Coreus) *in Hope Cat.* ii, p. 23 (1842).
Cletus signatus, *Walk.* (part.) *Cat. Het.* iv, p. 194. 39 (1871).
Cletus pallescens, *Walk. loc. cit.* p. 195. 40.

Somewhat elongate and slender; ochraceous, thickly darkly punctate, head and anterior area of pronotum usually paler in hue; antennæ long, reddish-ochraceous, the apical joint infuscated: body beneath and legs pale luteous, a small spot on the lateral area of each sternal segment and some small discal abdominal spots black; lateral pronotal angles acutely and somewhat forwardly produced; anterior lateral margin and a small spot near inner apical margin of the corium, and the connexivum, luteous; abdomen above red.

Length 9; breadth between pronotal angles 3 to $3\frac{1}{2}$ millim.

Hab. Bombay (*Coll. Dist.*). Bangalore (*Cameron*). Burma; Arrakan (*Ind. Mus.*). Tenasserim; Myitta (*Doherty*).

649. **Cletus caluminator**, *Fabr.* (Coreus) *Ent. Syst.* iv, p. 131 (1794): *Stål, Hem. Fabr.* i, p. 60 (1868).

Stål has thus described this species:—"Flavo-testaceous, beneath pale flavescent, granulate throughout; membrane and wings sordidly hyaline; abdomen above orange; anterior margin of the connexivum before middle black: three punctures to the lateral area of prosternum, one to the mesosternum, and one to the metasternum, and six series of minute spots to the abdomen, black; pronotum posteriorly obscure, pronotal angles moderately spinously produced, apically black; corium with the lateral margin beyond middle and a small spot near inner apical angle pale ochraceous, levigate; antennæ a little shorter than the body, first joint a little shorter than the second but subequal to third, fourth a little shorter than third; head unarmed."

I possess a single specimen which agrees with this description: it is a very elongate and narrow species, and is principally to be recognized by that character.

Length $10\frac{1}{2}$; breadth between pronotal angles $4\frac{1}{2}$ millim.

Hab. Nága Hills (*Chennell*). The locality given by Fabricius is "India Orientalis."

650. **Cletus elongatus**, *Dohrn, Stett. ent. Zeit.* xxi, p. 403 (1860).

"Elongate, rufescent-fulvous, fusco-punctate; pronotal lateral angles acute, fuscous; beneath flavous-testaceous, with two series of black punctures; legs and antennæ rufescent fulvous."

Length 9 millim.

Hab. Ceylon.

I have not seen the species. It may be a form of *C. calumniator*?

651. **Cletus feanus**, sp. n.

Ochraceous, thickly punctate, in some discoloured specimens inclining to purplish-brown; lateral margins of the pronotum palely crenulate, pronotal lateral angles somewhat strongly produced, their apices directed a little upward and forward, their posterior margins crenulate, two piceous spots on anterior area of pronotum; apical joint of antennæ pale ochraceous; connexivum marked with pale ochraceous at the incisures; sternum coarsely punctate, with a black spot on the lateral area of each segment; abdomen with scattered discal black spots; head with a short but distinct anterior lateral spine; basal joint of antennæ rugose near base, first and second joints a little the longest and subequal in length, third and fourth also subequal.

Length 10; breadth between pronotal angles 5 millim.

Hab. Burma; Karennee (*Fea*).

Allied to the Javan species *C. pugnator*, Dall.

Genus CLETOMORPHA.

Cletomorpha, *Mayr, Reise Nov., Hem.* p. 118 (1866); *Stål, En. Hem.* iii, p. 75 (1873).

Type, *C. bellula*, Stål, from the Malayan Archipelago.

Distribution. Ethiopian and Oriental Regions.

Closely allied to the preceding genus *Cletus*, but differing by the structure of the abdomen, which has the lateral segmental angles acutely produced.

652. **Cletomorpha hastata,** *Fabr.* (Cimex) *Mant.* ii, p. 287. 88 (1787); *Stål, Hem. Fabr.* i, p. 61 (1868).

Dull ochraceous; head, posterior areas of pronotum and corium thickly darkly punctate, giving those areas a brownish appearance; posterior area of corium crossed from inner angle by a narrow, transverse, macular, very pale luteous fascia; connexivum broadly spotted with fuscous; membrane pale bronzy-brown; antennæ ochraceous, apical joint short, cylindrically thickened, and infuscated, basal joint incrassated, subequal in length to third, second joint slightly the longest; pronotum with the lateral margins and the margins of the produced angles strongly spinous, the produced angles terminating in a short infuscated spine; rostrum passing the intermediate coxæ.

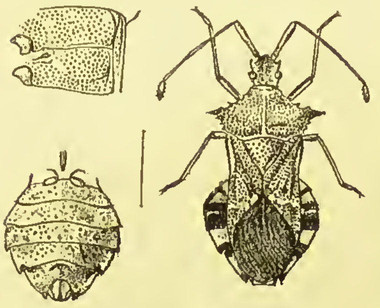

Fig. 232.—*Cletomorpha hastata.*

Length 8 to $8\frac{1}{2}$; breadth between pronotal angles 4 to $4\frac{1}{3}$ millim.

Hab. Karáchi (*Cumming*); Bombay (*Leith*); Calcutta (*Ind. Mus.*).

653. **Cletomorpha kirbyi,** *Dist. A. M. N. H.* (7) vii, p. 423 (1901).
Cletomorpha (?) denticulata, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 95 (1891), *nom. præocc.*

"Brown, granulated; front of the thorax sloping and, as well as the head, paler—in a smaller specimen intersected by a whitish median line, and with the lateral borders and hind border of the pale portion of the thorax whitish; hinder part of the thorax, scutellum, and corium darker brown, the latter with a narrow white fascia, hardly divided into spots, running from two thirds of the length of the costa to the inner margin. Antennæ and legs testaceous; the first joint of the antennæ much thickened but hardly as long as the second; the third distinctly shorter, the fourth much shorter, forming an oval club. Spines of the thorax

strong, concolorous; lateral margins before the spines with two small teeth near together in front, and three large isolated ones behind; lateral margins behind the spine with three or four small teeth; hinder edge of the thorax concave. Membrane hyaline (possibly darker towards the base). Abdomen blackish, with large, dull yellow marginal spots; abdominal angles produced. Underside brown in the larger specimen and pale in the smaller one, indistinctly speckled with darker." (*Kirby.*)

Length 7 to 8 millim.

Hab. Ceylon; Putlam (*Green*).

654. **Cletomorpha raja,** *Dist. A. M. N. H.* (7) vii, p. 423 (1901).

Ochraceous; posterior area of pronotum from between the lateral angles, scutellum, and corium thickly fusco-punctate; corium with the lateral margins (obsolete towards apex), and a transverse, sometimes maculate, fascia about one-third from apex, luteous; membrane pale fuscous, with the margins paler; sternum and abdomen beneath with a number of small discal black spots; antennæ fuscous, with the apical joint ochraceous, the first and second joints almost subequal in length, third shorter, but longer than fourth; pronotal angles acutely produced, with their apices distinctly recurved; sternum somewhat coarsely punctate; abdomen above pale reddish-ochraceous; connexivum spotted with black, the largest spot a short distance from base, followed by a smaller spot, and a still smaller spot at apex.

Length 9; breadth between pronotal angles 4 millim.

Hab. Sikhim; Mungphu (*Atkinson Coll.*). Assam; Margherita (*Doherty*). Burma; Karennee, Palon (*Fea*).

655. **Cletomorpha insignis,** sp. n.

Very pale luteous; posterior area of pronotum, scutellum, and corium thickly darkly punctate; corium crossed from inner angle by a somewhat broad luteous levigate fascia; two black spots on anterior disk of pronotum; basal joint of antennæ luteous with fine brownish speckles, second and third joints black, fourth ochraceous, with its extreme base black; first and third joints subequal in length, second longest, fourth shortest: body beneath and legs very pale luteous; sternum coarsely punctate, with a small black spot on the lateral area of each sternal segment; abdomen with scattered discal black spots; pronotal angles well produced, their extreme apices castaneous.

Length 7; breadth between pronotal angles $3\frac{1}{2}$ millim.

Hab. Burma; Bhamo, Karennee (*Fea*).

656. **Cletomorpha walkeri,** *Kirby, J. Linn. Soc., Zool.* xxiv, p. 96 (1891).
Cletomorpha benita, *Kirby, loc. cit.* p. 97.

"Head and thorax dark brown, granulated; the sloping part of the thorax with the back and sides, and a median line extending

to the head, testaceous; thoracic spines very acute; the lateral margins of the thorax in front entirely unarmed, behind with two or three minute teeth, the last forming a distinct angle; hinder edge of thorax slightly concave. Scutellum with the extreme base testaceous, expanding into spots at the sides; the tip may also possibly be testaceous. Inner angle of the corium with one or two small white spots. .... Antennæ, membrane, abdomen, legs, under surface &c. as in *C. kirbyi*, but with a rather more distinct row of black dots on the sides of the abdomen." (*Kirby.*)

Length 5 to 7; breadth between pronotal angles $3\frac{1}{2}$ to 4 millim.

Hab. Ceylon (*Lewis*).

Division *HYDARARIA.*

Hydararia, *Stål, En. Hem.* iii, p. 37 (1873).

A Division at present consisting of two genera, both of which have been hitherto regarded as entirely Ethiopian. We are now able to describe an Oriental species belonging to one of those genera, and it is probable that other species remain to be discovered.

The *Hydararia* may be at once recognized by the clavate apices of the antennal basal joint, and the somewhat less clavate apices of the femora.

Genus **HYDARA.**

Hydara, *Dall. List Hem.* ii, pp. 485 & 492 (1852); *Stål, Hem. Afr.* ii, pp. 5 & 73 (1865); *id. En. Hem.* iii, p. 80 (1873).

Type, *H. tenuicornis*, Westw., from Africa and Madagascar.

Distribution. Ethiopian and Oriental Regions.

Head subquadrate, slightly anteriorly produced; ocelli placed much nearer to the eyes than to each other; antennæ very long and slender, basal joint as long as the head and pronotum together, or longer, and suddenly clavate at apex, about as long as third joint, second shorter but longer than fourth; rostrum reaching the posterior coxæ, first joint about reaching the base of head; body elongate with the sides nearly straight; pronotum with the lateral angles spinous; legs slender, apices of the femora moderately thickened.

This genus has previously only been represented by a species received from South and West Africa and Madagascar.

657. **Hydara orientalis**, sp. n.

Ochraceous, thickly punctate, the punctures very coarse on the corium, arranged in longitudinal series on clavus, and very profound in a single longitudinal submarginal series to corium,

the last being piceous and giving the appearance of a dark submarginal line; antennæ, body beneath, and legs pale ochraceous; apical joint of antennæ black, its extreme apex white; a few scattered black spots or points to sternum, and a segmental series of black spots on each lateral area of the abdomen; sternum coarsely punctate; abdomen more coarsely punctate on the lateral margins.

Length 7 millim.

Hab. Calcutta (*Coll. Dist.*). Burma; Teinzo, Bhamo (*Fea*).

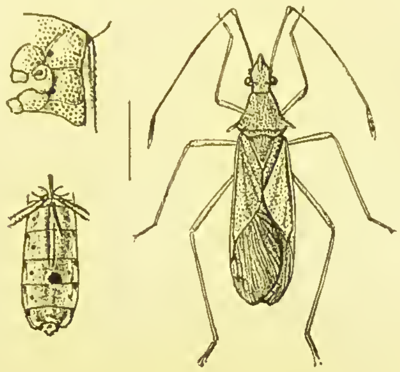

Fig. 233.—*Hydara orientalis.*

Division *PHYLLOMORPHARIA.*

Phyllomorpharia, *Stål, En. Hem.* iii, p. 37 (1873).

This Division terminates the sectional grouping of the Coreinæ, and includes the most aberrant and remarkable insects found in this subfamily. The lobate and foliaceous abdominal expansions, and the generally spinose or ciliate marginal and other structural characters, prevent the *Phyllomorpharia* from being confused with any other representatives of the whole family. In fact they are somewhat unique among the Heteroptera, finding their superficial analogues in the family Tingididæ.

The leaf-like appearance is very pronounced, and the old South-African traveller Sparrman has recorded that he mistook these insects for falling leaves when he first observed them.

The *Phyllomorpharia* at present comprise three described genera, distributed in the Palæarctic, Ethiopian, and Oriental Regions. From the last only one species has been recorded. Our acquaintance with the Oriental representatives of the group is certainly imperfect, and it now remains with collectors to give us more information respecting these highly interesting Heteroptera.

Genus CRASPEDUM.

Craspedum, *Amy. & Serv. Hém.* p. 234 (1843); *Stål, En Hem.* iii, p. 80 (1873).

Type, *C. phyllomorphum*, Latr., an African species.

Distribution. Ethiopian and Oriental Regions.

This genus is to be distinguished by the posterior margin of the

pronotum being not or only obsoletely sinuate; the lateral abdominal lobes are ampliated, and the sixth moderately truncated; the first joint of the rostrum extends beyond the region of the eyes. The following figure will best afford a clue to the general structural characters.

658. **Craspedum ? indicum**, *Westw.* (Phyllomorpha) *Thes. Ent. Oxon.* p. 190, pl. 36, f. 1 (1874).

"Pale fulvescent, spinous, variegated with brown, subopaque; veins of the abdominal lobes somewhat distinct; abdomen rounded, fourth and fifth abdominal segmental lobes rounded, not subemarginate; sixth segmental lobe broadly subtruncated; femoral spines long and obliquely inserted; antennæ with the second joint not much more than half the length of third."

Fig. 234.
Craspedum ? indicum.

Length 8 millim.

Hab. India (*Boys*).

I have not seen this species, but reproduce Westwood's description and figure. From these it is impossible to place with absolute certainty the species in the genus *Craspedum*, but it is more than probable that in thus locating it no mistake has been made.

Genera and Species of Coreinæ *recorded from India, but not included in this volume.*

Verlusia rhombea, Kirby (nec Linn.), J. Linn. Soc., Zool. xxiv, p. 92 (1891).

Mr. Kirby, in his enumeration of the Ceylonese Rhynchota, included "a single immature specimen in Mr. Green's collection, without special locality, apparently belonging to this common European species." As I have recorded (A. M. N. H. (7) vii, p. 432, 1901), this species belongs to the Phymatidæ.

Lybas turpis, Walk. Cat. Het. iv, p. 150. 5 (1871); Kirby, J. Linn. Soc., Zool. xxiv, p. 93 (1891).

The type of this species could not be found in the National Collection. In its place was a mutilated specimen of an American species *Leptoglossus zonatus*, which misled Kirby into including *L. turpis* in his enumeration of Ceylonese Rhynchota, and writing "very like a species of *Homœocerus* in appearance."

Subfamily II. PSEUDOPHLŒINÆ.

Pseudophlœina, *Stål, Öfv. Vet.-Ak. Förh.* 1872, no. 6, p. 50.

This subfamily is to be distinguished from the Coreinæ by the absence of the impression near the central lobe of the head; the dorsal surface of the sixth abdominal segment in both sexes has the posterior angles prominently recurved, slightly dentate or spinose; tibiæ rounded, not sulcated.

The Pseudophlœinæ, a much smaller subfamily than the Coreinæ, are almost universally distributed. Records of their presence in the Australasian Region are practically wanting, but of this zoological area our rhynchotal knowledge is still very fragmentary.

Synopsis of Genera.

A. Scutellum elevated, convex .... CLAVIGRALLA, p. 401.
B. Scutellum plain, not elevated.
  a. Antennæ with the first joint about equal in length to head.
    a. Mesosternum obtusely sulcated .... MYLA, p. 403.
    b. Mesosternum and head beneath profoundly sulcated.................... TRALLIANUS, p. 404.
  b. Antennæ with the first joint shorter than head .... HOPLOLOMIA, p. 403.

Genus CLAVIGRALLA.

Clavigralla, *Spin. Ess.* p. 200 (1837); *Dall. List Hem.* ii, p. 487 (1852); *Stål, En. Hem.* iii, p. 83 (1873).

Type, *C. gibbosa*, Spin.

Distribution. Oriental Region and China.

Rostrum with the second and fourth joints about equally long, or fourth a little shorter than the second, the first joint not extending beyond the region of the eyes; antenniferous tubercles unarmed; posterior tibiæ about a fourth or third part shorter than the posterior femora; pronotum with the lateral angles more or less spinously produced, with their posterior margins distinctly dentate; scutellum elevated and convex, the second and third joints of the antennæ subequal in length, or second slightly longer than the third; lateral segmental angles spinously produced; femora moderately clavate towards apices.

659. **Clavigralla gibbosa,** *Spin. Ess.* p. 202 (1837).

Ochraceous, punctate, moderately pilose; posterior area of pronotum, apical area of corium, and spots on connexivum

castaneous; antennæ ochraceous, apical joint pale castaneous, second and third joints subequal in length; pronotum transversely and somewhat conically tuberculate on disk, the lateral angles produced into acute black spines directed a little forward and upward, the anterior area thickly and strongly pilose; scutellum elevated, thickly and strongly pilose; membrane pale hyaline; legs luteous, about apical halves of femora, bases, apices, and a faint central annulation to tibiæ, castaneous; body beneath obscure brownish-ochraceous; posterior femora spined beneath near apices (these spines are not sufficiently shown in the figure).

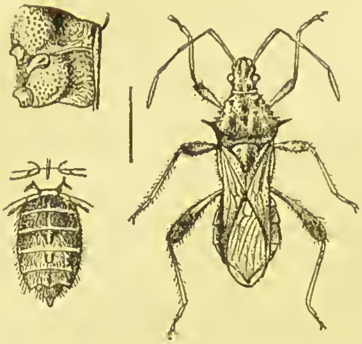

Fig. 235.—*Clavigralla gibbosa.*

Length 8 to 10; breadth between pronotal angles 4 to 5 millim.

Hab. Bombay (*Coll. Dist.*). Bangalore (*Cameron*). Tenasserim; Myitta (*Doherty*).

660. **Clavigralla horrens,** *Dohrn, Stett. ent. Zeit.* xxi, p. 403 (1860).

Head, pronotum, and scutellum brownish-ochraceous, coarsely punctate, somewhat granulose, moderately pilose; corium ochraceous, its apex castaneous; connexivum ochraceous with castaneous spots; legs luteous, apical areas of the posterior femora and bases and apices of posterior tibiæ castaneous, each femur with a luteous spot before apex: body beneath obscure brownish-ochraceous, the lateral areas of sternum and abdomen distinctly marked with cretaceous, abdomen more or less suffused with ochraceous; pronotum with two more or less distinct central longitudinal ridges, the lateral angular spines long, black; antennæ ochraceous, the apical joint a little darker, second joint slightly longer than the third; posterior femora longly spined beneath near apex; lateral angles of the posterior segments strongly spined.

Length 7; breadth between pronotal angles 3 millim.

Hab. Bombay (*Coll. Dist.*). Ceylon (*Green & Lewis*). Assam. Burma; Palon, Karennee (*Fea*).

661. **Clavigralla scutellaris,** *Westw.* (Coreus) *in Hope Cat.* ii, p. 24 (1842).

Brownish-ochraceous; antennæ and corium luteous; pronotum and scutellum with a distinct luteous longitudinal ridge, this ridge sometimes concolorous in hue; pronotum with four central small dark conical tubercles, lateral angles spinously produced, the spines black; connexivum ochraceous, the last two segments almost

entirely ochraceous: body beneath obscure brownish-ochraceous, abdomen mottled with ochraceous, head beneath and sternum very coarsely punctate; legs luteous, apical areas of femora, bases and apices of tibiæ castaneous; posterior femora spined beneath near apices; second joint of the antennæ a little longer than the third.

Length 9 to 10; breadth between pronotal angles $4\frac{1}{2}$ millim.
Hab. Gogo (*vide Westwood*). Burma; Bhamo, Karennee (*Fea*).

Genus MYLA.

Myla, *Stål, Hem. Afr.* ii, pp. 8 & 111 (1865); *id. En. Hem.* iii, p. 83 (1873).

Type, *M. hoploxys*, Dall., an African species.
Distribution. Ethiopian and Oriental Regions.
Scutellum not convexly elevated; body subelongate, somewhat depressed; head somewhat prominent in front of the antenniferous tubercles; rostrum extending to the intermediate coxæ; antennæ with the second joint shorter than the third; mesosternum sulcate; posterior legs somewhat widely separated at base; anterior femora spined beneath near apex; posterior femora thickened, spined beneath near apex.

Fig. 236.—*Myla hoploxys.*

Only two species of this genus have to the present time been described. As I have not received the Ceylonese species, the typical African form is figured as a guide to the genus.

662. **Myla concolor**, *Dohrn* (Clavigralla), *Stett. ent. Zeit.* xxi, p. 403 (1860); *Stål, En. Hem.* iii, p. 84 (1873).

"Reddish-ochraceous; punctured with fuscous; pronotum anteriorly griseously villose; pronotal angles acute, spines a little directed forward; lateral pronotal margins bidentate; membrane pale; abdominal margin with three spines: body beneath griseous-flavous-tomentose." (*Dohrn.*)
Length 7 millim.
Hab. Ceylon.

Genus HOPLOLOMIA.

Hoplolomia, *Stål, En. Hem.* iii, p. 84 (1873).

Type, *H. scabricula*, Stål.
Distribution. India and Burma.
Head very large, a little longer than the pronotum; antenniferous

tubercles prominent, armed with an obscure incurved spine; rostrum reaching the posterior coxæ or base of metasternum, the basal joint about reaching the area of the posterior margin of the eyes; antennæ with the first joint shorter than the head, second a little shorter than the first, third joint longest, fourth fusiform; basal margin of pronotum subtruncated; posterior femora with their bases slender, incrassated towards their apices, beneath which they are prominently spinous.

663. **Hoplolomia scabricula,** *Stål, En. Hem.* iii, p. 84 (1873).

Head, antennæ, pronotum, and scutellum brownish-ochraceous; corium ochraceous, its apical area brownish; connexivum stramineous, basal half broadly spotted with castaneous, segmental marginal apical spines black; legs ochraceous, posterior femora, excluding bases, castaneous; apices of the tibiæ castaneous; body beneath obscure pale castaneous; pronotum with two prominent central discal tubercles, lateral angles produced and spinous, lateral margins strongly dentate.

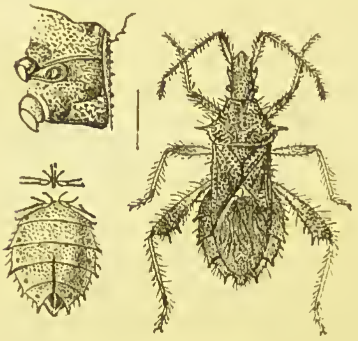
Fig. 237.—*Hoplolomia scabricula.*

Length $6\frac{1}{2}$ millim.

Hab. Burma; Rangoon, Palon, Bhamo (*Fea*).—Stål's habitat was "India Orientalis."

I am indebted to the kindness of Dr. Yngve Sjöstedt, of the Stockholm Museum, for letting me see a typical specimen of this species, which has formed the subject of the above illustration.

Genus **TRALLIANUS**, nov.

Type, *T. chennelli*, Dist.
Distribution. Assam.

Moderately elongate and compressed; head elongate, subquadrate, robust, moderately produced in front of the antenniferous tubercles; ocelli placed a little behind the eyes and about as far apart from them as from each other; antenniferous tubercles prominent; antennæ robust, basal joint incrassate, somewhat compressed, about equal in length to head, subequal in length to fourth joint, second joint longest, longer than third; rostrum reaching the intermediate coxæ, first joint not quite reaching base of head; eyes inserted on side of head a little beyond base; pronotum narrowed towards head; posterior margin slightly sinuate before scutellum, with a distinct deflected ridge between the lateral angles; head beneath and sternum centrally sulcated; legs moderately short and stout, femora unarmed, posterior femora not extending much beyond the

middle of abdomen: corium with the apical angle produced: membrane pellucid, the veins mostly longitudinal.

664. **Trallianus chennelli**, sp. n.

Ochraceous, finely and obscurely punctate; antennæ, scutellum, corium, and legs with a purplish tinge; lateral margins of corium luteous; membrane pale hyaline, colourless; apical joint of antennæ cylindrical and ochraceous; pronotum with a distinct discal foveate impression, the lateral angles subprominent, rounded, the lateral margins very narrowly paler and sublevigate; head beneath and sternum more thickly and coarsely punctate, a straight foveate impression on each side from intermediate coxæ to apex of sixth abdominal segment.

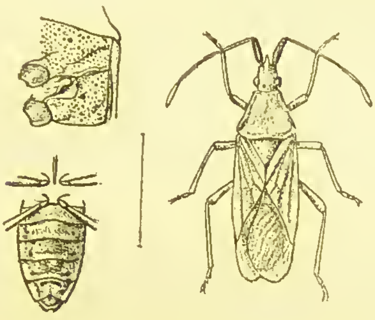

Fig. 238.—*Trallianus chennelli.*

Length 13; breadth between pronotal angles 4 millim.

Hab. Khási Hills (*Chennell*).

To this subfamily doubtless belongs the species described by Spinola under the name of *Merocoris spinicollis* (Ess. Hém. p. 216, 1837), the description of which I, with other students of the Rhynchota, have as yet been unable to identify with any species examined. It was stated to have been collected at Bombay by Mons. Dupont. It seems probably to refer to a species belonging to the genus *Hoplolomia*, but the diagnosis is too brief and vague for exact determination.

Division *STENOCEPHALARIA*.

Stenocephalaria, *Stål, En. Hem.* iii, p. 84 (1873).

Pronotum twice or nearly twice broader than the head; head long, the lateral lobes distinctly projecting at apex and longer than the central lobe; insertion of the antennæ remote from the eyes; apical margin of the corium straight, a little shorter than the claval suture.

This Division is principally Palæarctic and Ethiopian in distribution, and is only just represented in this fauna. It is at present known by two genera, one of which occurs in British India.

Genus STENOCEPHALUS.

Stenocephalus, *Latr. Fam. Nat.* p. 421 (1825); *Stål, En. Hem.* iii, p. 85 (1873).
Dicranomerus, *Hahn, Wanz. Ins.* i, p. 22, f. 13 (1831).
Subg. Dichromerus, *Stål, En. Hem.* iii, p. 85 (1873).

Type, *S. agilis*, Scop., a Palæarctic species.

Distribution. Palæarctic, Ethiopian, Neotropical, and Oriental Regions.

In addition to the Divisional characters given for the *Stenocephalaria* (*supra*), the first joint of the antennæ is as long or a little longer than the head, and the fourth joint longer than the third: ocelli placed rather nearer to base of head than to posterior margin of eyes.

665. **Stenocephalus lateralis,** *Sign. Bull. Soc. Ent. Fr.* 1879, p. lviii.
Stenocephalus orientalis, *Dist. Ent. Month. Mag.* xvi, p. 202 (1880).

Pale fuscous, very thickly and coarsely punctate; lateral margins of the pronotum, corium, and membrane impunctate and luteous; antennæ strongly pilose, first joint robust, about as long as the head, dull fuscous, second joint about as long as the fourth, third and first subequal; the second joint is pale luteous, obscure fuscous at base, and more broadly so at middle and apex, third joint obscure fuscous, luteous at base, fourth pale fuscous, luteous at base; head and anterior portion of pronotum somewhat darker than other portions of the upper surface, and less strongly punctate; legs luteous; fore and intermediate femora lightly fuscous at apex, hind femora broadly and more distinctly fuscous; apices and bases of tibiæ and tarsi fuscous.

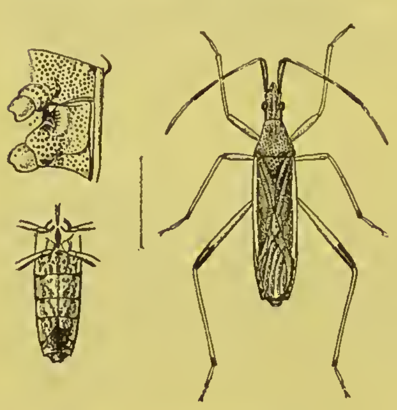

Fig. 239.—*Stenocephalus lateralis.*

The male differs from the female by its smaller size, the second joint of the antennæ only fuscous at base and apex; anterior and intermediate femora uniformly pale luteous, and apices of tibiæ fuscous only.

Length 10 to 12 millim.

Hab. Bombay and Madras (*Coll. Dist.*). Ceylon (*Green*).

Subfamily III. ALYDINÆ.

Alydina, *Stål, Öfv. Vet.-Ak. Förh.* 1872, no. 6, p. 50.

Bucculæ small, short, placed before insertion of antennæ; pronotum posteriorly not broader or slightly broader than breadth of head, rarely nearly twice, and very rarely more than twice as broad; dorsal surface of first abdominal segment posteriorly rounded, sometimes strongly produced; scutellum frequently not reaching base of metanotum, somewhat narrower than head between eyes.

The Alydinæ are almost universally distributed, but are poorly represented in the fauna of British India.

Division *MICRELYTRARIA.*

Micrelytraria, *Stål, En. Hem.* iii, p. 84 (1873).

Pronotum posteriorly not or only a little broader than the head; the second joint of the rostrum is a little longer than the two apical joints together.

The *Micrelytraria* comprise some fourteen genera, the majority of which are found in the Neotropical Region; the others are distributed in the Palæarctic Region—extending to Japan and the Oriental and Ethiopian Regions.

Genus **DULICHIUS.**

Dulichius, *Stål, Hem. Afr.* ii, pp. 7 & 89 (1865); *En. Hem.* iii, p. 89 (1873).
Formicoris, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 122 (1891).

Type, *D. trispinosus*, Stål, an African species.
Distribution. Ethiopian and Oriental Regions.

Body elongate; head oblong, longer than the pronotum, before the eyes strongly produced, above very convex; eyes placed a little behind the middle of the head, very prominent; rostrum reaching or passing the intermediate coxæ, first joint moderately incrassated, shorter than the head, second longer than the first, third and fourth short; antennæ as long as the body or a little longer, fourth joint longest; base of pronotum depressed and truncate, spined near the lateral angles; scutellum longer than broad, the apex longly spined; abdomen subglobose, much wider than the head or pronotum, narrowed at base and apex, the lateral angles raised and prominent.

This genus is very aberrant, and its species strongly resemble or, as is generally expressed, "mimic" ants; three species have been described, two of which are African and the third belongs to the fauna of British India.

666. **Dulichius inflatus**, *Kirby* (Formicoris), *J. Linn. Soc., Zool.* xxiv, p. 122, pl. iv, ff. 17 & 17 *a* (1891); *Bergr. Entom. Month. Mag.* 1892, p. 126.

Dulichius wroughtoni, *Bergr. Entom. Month. Mag.* 1892, p. 107.

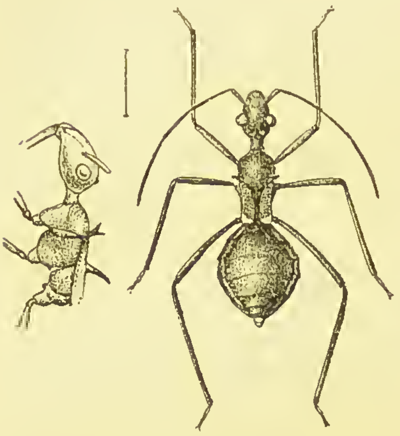

Fig. 240.—*Dulichius inflatus.*

"Dull black, coriaceous, very finely pubescent; tegmina abbreviated, not extending beyond the contracted base of the abdomen, longitudinally ridged, and with very large punctures between, the outer tips whitish; pronotum with a strong spine on each side at the base of the tegmina, and a third rising between them at the tip of the scutellum; tarsi whitish, the last joint on the four posterior legs darker; abdomen smooth, shining, slightly iridescent, sericeous (red in immature specimen); last joint of antennæ testaceous." (*Kirby.*) This description refers to Kirby's type, which is figured above.

Length 8 to 11 millim.

Hab. Poona; Nilgiri Hills (*Wroughton*). Calcutta, Barrackpore (*Rothney*). Ceylon; Nitagala (*Green*).

Mr. Wroughton sent specimens of this remarkable insect for exhibition at the Entomological Society, with the following note:—"I have taken a good many specimens of a bug which has achieved a very fair imitation of *Polyrrhachis spiniger* (under the same stone with which it may be found), even to the extent of evolving a pedicle and spines in what, were it an ant, would be its metanotum. Curiously enough, however, these spines are apparently not alike in any two specimens. Is it that the bug is still waiting for one of its race to accidentally sport spines more like those of *P. spiniger*, and thus to set the ball of evolution rolling afresh? or is it that the present rough copy of *spiniger's* spines is found sufficient to deceive?" Mr. Rothney remarked:—"I have not found the species mimicking *Mutilla*: but in Calcutta and Barrackpore, where *P. spiniger* is a tree-ant, forming its net by spinning together the twigs of a shrub, the mimicking bug also assumes arboreal habits, and may be found on the trunks of trees with the ants" (Proc. Ent. Soc. 1891, pp. xvii, xviii). Dr. Bergroth, however, makes the pertinent remark, "Mr. Wroughton has only found the brachypterous form. If the species has a macropterous form, it is probable that the form has little or no resemblance to an ant" (Ent. Month. Mag. 1892, p. 107).

Division *LEPTOCORISARIA*.

Leptocorisaria, *Stål, En. Hem.* iii, pp. 84-5 (1873).

This Division differs from the *Micrelytraria* in having the second joint of the rostrum not longer than the two apical joints together; the pronotum posteriorly is about one half broader than the head, and the first joint of the rostrum extends beyond the eyes.

The *Leptocorisaria* are found in all the chief zoological regions; China is the only recorded Palæarctic habitat; their representation in the Ethiopian Region is very limited; and they are chiefly Neotropical and Oriental insects.

The Division at present contains about seven genera.

Synopsis of Genera.

A. Head with the lateral lobes porrect, produced in front of central lobe .... LEPTOCORISA, p. 409.

B. Head deflected in front, lateral lobes not produced.............................. CURUPIRA, p. 411.

Genus **LEPTOCORISA.**

Leptocorisa, *Latr. Fam. Nat.* p. 421 (1825); *Stål, En. Hem.* iii, p. 86 (1873).
Gerris (part.), *Fabr. Ent. Syst.* iv, p. 187 (1794).
Myodochus, *Burm. Handb.* ii, i, p. 325 (1835).
Stenocoris, *Burm. loc. cit.* p. 1010 (1839).
Rhabdocoris, *Kolenati, Melet. Ent.* ii, p. 67 (1845).
Subg. Erbula, *Stål, En. Hem.* iii, p. 86 (1873).

Type, *L. tipuloides*, de Geer, a Nearctic and Neotropical species.

Distribution. Nearctic, Neotropical, Ethiopian, Oriental, and Australasian Regions, and China.

Head long, lateral lobes porrect and produced in front of the central lobe; pronotum long, slightly deflected anteriorly; antennæ with the first joint very slightly and regularly thickened, its apex obscurely incrassate; body long and elongate; mesosternum broadly sulcate.

667. **Leptocorisa varicornis**, *Fabr.* (Gerris) *Syst. Rhyng.* p. 260 (1803); *Wolff, Icon.* v, p. 202, f. 196 (1811); *Burm.* (Coreus) *Nov. Act. Acad. Leop.* xvi, *Suppl.* p. 298 (1834); *id.* (Myodochus) *Handb.* ii, p. 325 (1835).

Leptocorisa flavida, *Guér. Voy. Coq., Ins.* p. 178, pl. xii, f. 12 (1830).
Leptocorisa chinensis, *Dall. List Hem.* ii, p. 483 (1852).

Ochraceous; above somewhat thickly punctate; eyes black; membrane pale, colourless, hyaline; basal joint of antennæ ochraceous, second, third, and fourth joints fuscous with their bases luteous; first and fourth joints longest and subequal in length, second and third shortest and subequal; sternum very coarsely

punctate; rostrum reaching the intermediate coxæ, its apex piceous; abdomen above testaceous.

Length 15 to 17 millim.

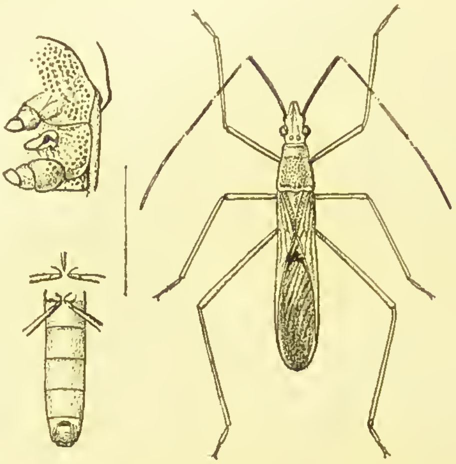

Fig. 241.—*Leptocorisa varicornis.*

Hab. Sind (*Coll. Dist.*). Bengal; Calcutta (*Ind. Mus.*); Bankura (*Ind. Mus.*), Ranchi (*Irvine*). Sikhim. Assam; Margherita (*Ind. Mus.*), Shillong (*Ind. Mus.*), Khási Hills (*Chennell*). Bombay. Madras; Tinnevelly (*Ind. Mus.*); Bangalore (*Cameron*); Trivandrum. Ceylon (*Green*). Burma; Teinzo, Palon, Bhamo, Katha, Karennee (*Fea*). Mergui (*Ind. Mus.*).—Also recorded from the Malay Peninsula, several islands of the Malayan Archipelago, and from China.

668. **Leptocorisa acuta**, *Thunb.* (Cimex) *Nov. Ins. Sp.* ii, p. 34 (1783); *Dist. P. Z. S.* 1901, i, p. 331.
Cimex angustatus, *Fabr. Mant. Ins.* ii, p. 308 (1787).
Cimex angustus, *Gmel. Syst. Nat.* i, iv, p. 2193 (1788).
Gerris oratorius, *Fabr. Ent. Syst.* iv, p. 191 (1794).
Leptocorisa bengalensis, *Westw. in Hope Cat.* ii, p. 18 (1842).
Rhabdocoris arcuata, *Kolenati, Melet. Ent.* ii, p. 68 (1845).
Myodochus trinotatus, *Herr.-Sch. Wanz. Ins.* viii, p. 95, f. 863 (1848).
Leptocorisa maculiventris, *Dall. List Hem.* ii, p. 484 (1852).

Above brownish-olivaceous, beneath pale greenish; abdomen above reddish-brown, with the margins pale greenish-yellow; antennæ fuscous, bases of second, third, and fourth joints luteous; above, with sternum beneath, thickly and coarsely punctate; a small distinct tubercle near each lateral pronotal angle; a distinct central carinate line to pronotum.

Length 13 to 15 millim.

Hab. Bengal (*vide Westwood*). Calcutta (*Ind. Mus.*).—Also received from China and from several islands of the Malayan Archipelago.

669. **Leptocorisa costalis**, *Herr.-Sch.* (Myodochus) *Wanz. Ins.* viii, p. 96, f. 864 (1848).

Leptocorisa biguttata, *Walk. Cat. Het.* iv, p. 174. 11 (1871); *Bredd. Abh. nat. Ges. Halle*, xxiv, p. 73 (1901).

Leptocorisa varicornis, *var.* biguttata, *Bredd. Abh. Senckenb. Ges.* xxv, p. 158.

Ochraceous; antennæ, basal lateral margins of head, small tubercle near lateral angles of pronotum, clavus, and inner area of corium black; base and apex of apical joint of antennæ luteous; legs ochraceous; tibiæ, tarsi, and apices of femora fuscous; body above and sternum beneath coarsely punctate.

Length 15 to 18 millim.

Hab. Burma; Palon (*Fea*). Tenasserim; Thagata (*Fea*), Mergui (*Ind. Mus.*).—Also recorded from Java, Borneo, Celebes, and Gilolo.

Genus CURUPIRA.

Curupira, *Dist. Ann. Soc. Ent. Belg.* xxxii, *Bull.* p. xi (1888).

Type, *C. illustrata*, Dist., a Brazilian species.

Distribution. Neotropical Region; Burma and Malayan Archipelago.

Head short and broad, deflected in front; eyes very prominent, their outer margins wider than the anterior margin of the pro-

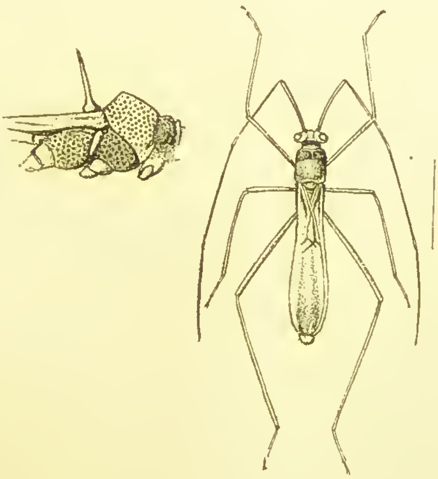

Fig. 242.—*Curupira bicolor.*

notum; pronotum elongate, the posterior margin deflexed, the posterior angles somewhat foveate and elongate; scutellum with a long erect spine near apex; hemelytra not quite reaching the apex of abdomen; legs long and slender; antennæ elongate; rostrum about reaching the intermediate coxæ, the penultimate joint a little shorter than the apical joint, which is the longest.

670. **Curupira bicolor**, *Dist. A. M. N. H.* (7) vii, p. 426 (1901).

Ochraceous; anterior third of pronotum, base of scutellum, sternum, and sometimes inner margins of lateral lobes of head, plumbaginous; posterior angles of prosternum broadly ochraceous; abdomen beneath reddish-ochraceous, with its lateral margins luteous; eyes castaneous; pronotum, scutellum, and sternum thickly and coarsely punctate; second and third joints of antennæ subequal in length, fourth longest; spine to scutellum long and obliquely ascendant.

Length 7 to 9 millim.

Hab. Burma; Metanja, Bhamo, Karennee (*Fea*).—Found in the Malay Peninsula, and distributed throughout the Malayan Archipelago.

Division *ALYDARIA*.

Alydaria, *Stål, En. Hem.* iii, p. 85 (1873).

Pronotum posteriorly more or less broader than the head; head large, not or slightly shorter than the pronotum; first joint of the rostrum not extending much behind eyes; posterior femora sometimes spinous.

This is a somewhat large Division, represented in all the zoological regions, but very poorly so in the fauna of British India, only two genera out of twenty-two known to entomologists having been recorded thence hitherto.

Synopsis of Genera.

A. Posterior femora unarmed; odoriferous apertures very obscure and difficult to distinguish .... EUTHETUS, p. 412.
B. Posterior femora spined beneath; odoriferous apertures distinct .... RIPTORTUS, p. 413.

Genus **EUTHETUS**.

Euthetus, *Dall. List Hem.* pp. 467 & 479 (1852); *Stål, En. Hem.* iii, p. 91 (1873).

Type, *E. pulchellus*, Dall.

Distribution. Ethiopian and Oriental Regions.

Head triangular; antennæ rather more than half the length of the body; basal joint shorter than the head, second joint a little more than half the length of the first; third joint nearly as long as the first and second together, fourth longest; rostrum short, scarcely passing the anterior coxæ; first and second joints nearly equal in length; first joint very stout, nearly as long as the head; third joint shortest, fourth shorter than the first and second; legs long and slender, especially the posterior legs, the femora of which are unarmed and the tibiæ straight; tarsi long and slender, the basal joint forming two-thirds of the length of the whole tarsus.

671. **Euthetus pulchellus**, *Dall. List Hem.* ii, p. 479, pl. xiv, f. 3 (1852).

"Head black, with the tip testaceous; pronotum brownish-testaceous, thickly and finely punctured, with the disk and some small spots on the sides brown, the lateral and hinder margins black; scutellum blackish, very finely punctured; corium brown, thickly and finely punctured and irrorated with testaceous, the apex yellow; membrane brownish; abdomen beneath black, with the centre of the base dull red, and a yellow transverse band, interrupted in the middle, on the posterior margin of the third segment; sternum black, finely aciculated, with a yellow spot at the base of each leg, prosternum minutely punctate, metasternum red; coxæ and trochanters red; femora brown; posterior femora with a yellow ring near the apex, and the apex itself black; tibiæ testaceous, beset with short, stiff, black hairs, and with the apex brown; tarsi testaceous, beset with stiff black hairs like the tibiæ, with the apex brown; rostrum black; antennæ with the first three joints whitish testaceous, with a few minute black hairs, their tips brownish; apical joint dusky, with the base dull yellow." (*Dallas.*)

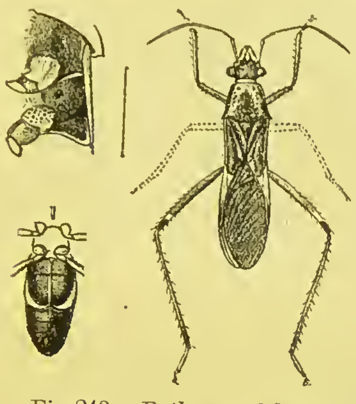

Fig. 243.—*Euthetus pulchellus.*

Length 9 millim.

Hab. North India (*Boys, Brit. Mus.*).

I have only seen the typical specimen of this species, which is here figured.

Genus **RIPTORTUS**.

Riptortus, *Stål, Öfv. Vet.-Ak. Förh.* 1859, p. 460; *id. En. Hem.* iii, p. 90 (1873).

Subg. Melanolamprus, *Stål, En. Hem.* iii, p. 93 (1873).

Type, *R. dentipes*, Fabr., found in Africa and Madagascar.

Distribution. Ethiopian, Oriental, and Australasian Regions; also found in China.

Head no broader than the base of the pronotum; eyes prominent, subpedunculate; fourth joint of the antennæ longer than the two preceding joints taken together; scutellum not reaching the base of the metanotum; rostrum with the second joint not or slightly longer than the fourth; basal margin of the pronotum bisinuate before the scutellum; tibiæ moderately compressed, posterior femora spinose.

672. **Riptortus pedestris**, *Fabr.* (Gerris) *Syst. Ent.* p. 727 (1775); *Stål, Hem. Fabr.* i, p. 64 (1868).
Cimex pedes, *Gmel. Syst. Nat.* i, iv, p. 2191 (1788).

Dark brownish ochraceous, finely and obscurely ochraceously pilose; posterior margin of the pronotum and a lateral fascia on each side of head, not extending beyond base of antennæ, dark castaneous; sternum somewhat reddish-ochraceous, with prominent pale lævigate ochraceous spots placed near the coxæ; abdomen beneath and legs ochraceous, the first mottled with fuscous; abdomen above olivaceous, largely bimaculated with ochraceous; connexivum ochraceous, with large fuscous spots; posterior femora thickly mottled with reddish-brown; posterior tibiæ with the bases and apices reddish-brown; lateral pronotal spines black.

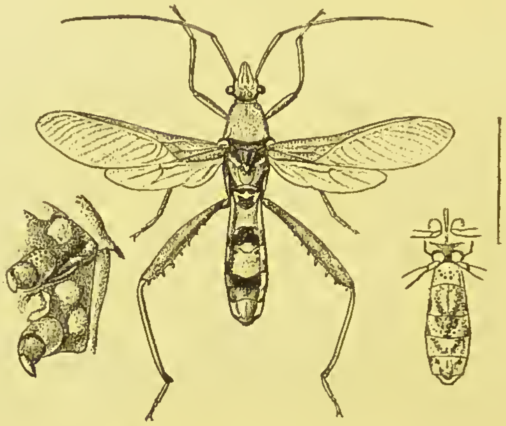

Fig. 244.—*Riptortus pedestris.*

Length 15 to 18; breadth between pronotal angles 3 to 4 millim.

Hab. Bombay (*Leith*). Bangalore (*Cameron*). Ceylon (*Lewis*). Khási Hills (*Chennell*). Burma; Arrakan (*Coll. Dist.*), Karennee (*Fea*).—Also received from the Malay Peninsula.

673. **Riptortus fuscus**, *Fabr.* (Lygæus) *Ent. Syst. Suppl.* p. 539 (1798); *Stål, Hem. Fabr.* i, p. 64 (1868).
Alydus ventralis, *Westw. in Hope Cat.* ii, p. 20 (1842).
Alydus major, *Dohrn, Stett. ent. Zeit.* xxi, p. 402 (1860).

Closely allied to the preceding species (*R. pedestris*), and principally differing from it by the partial or total absence of the pale lævigate sternal spots, which even when present are small and usually obliterated on the metasternum.

Length 13 to 17; breadth between pronotal angles 3 to 4 millim.

Hab. Bengal (*Stockholm Mus.*). Bombay (*Leith*). Bangalore

(*Cameron*). Ceylon. Burma; Karennee (*Fea*).—Also received from the Malay Peninsula.

I have a specimen taken off the coast of Malabar in lat. 7° 46′ N., long. 76° 26′ E.

674. **Riptortus linearis**, *Fabr.* (Lygæus) *Syst. Ent.* p. 710 (1775); *Stål, Hem. Fabr.* i, p. 64 (1868).
Alydus dentipes, *Herr.-Schäff. Wanz. Ins.* viii, p. 99, f. 867 (1848).
Alydus clavatus, *Dohrn, Stett. ent. Zeit.* xxi, p. 402 (1860).

Dark cinnamon-brown; pronotum, scutellum, corium, and lateral areas of sternum distinctly punctate; first, second, and third joints of antennæ, fascia at base of head between eyes, central fascia to head beneath, lateral angular spines to pronotum, disk of sternum, and abdomen black; a sublateral lævigate pale ochraceous fascia margined with black on each side of head and sternum; lateral areas, base, and some spots on discal black of abdomen, luteous; a small spot at the middle of posterior pronotal margin, and the apex of the scutellum, pale luteous.

Length 14 to 16; breadth between pronotal angles 3 to $3\frac{1}{2}$ millim.

Hab. Sikhim, Darjeeling (*Coll. Dist.*). Bangalore (*Cameron*). Bor Ghât (*Dixon*). Ceylon (*Green & Lewis*). Burma; Metanja, Bhamo, Palon (*Fea*). Tenasserim; Myitta (*Doherty*), Meetan, Kawkareet (*Fea*).—Also received from several islands of the Malayan Archipelago.

675. **Riptortus strenuus**, *Horv. Term. Füzetek*, 1889, p. 35.

"Cinnamon-brown, greyish-silky; antennæ unicolorous, body concolorous, head with the vertex behind eyes and between ocelli and eyes black; head beneath, a long spine at the lateral pronotal angles, disks of sternum and abdomen black; a lateral fascia to head and sternum pale luteous, lævigate, above and beneath margined with black, this fascia is broader on the meso- and meta-sterna than on the head and prosternum; abdomen with the base and lateral areas pale luteous, a median broad black vitta on each side and at apex of fourth and fifth segments angularly produced; posterior femora beneath and apices of posterior tibiæ black; rostrum extending to the intermediate coxæ.

"Allied to *R. linearis* but larger, antennæ and body concolorous; rostrum not passing the intermediate coxæ; lateral pronotal spines longer, the lateral fascia to head and sternum unequal in breadth, &c.

"Length $13\frac{1}{2}$ millim."

Hab. Himalaya (*Budapest Mus.*).

I have not seen this species and reproduce Horváth's description.

Subfamily IV. CORIZINÆ.

Corizina, *Stål, Öfv. Vet.-Ak. Förh.* 1872, no. 6, p. 50.

From the previous subfamilies of the Coreidæ the Corizinæ may be distinguished by having the odoriferous orifices sometimes indistinguishable, and by having only the dorsal surface of the fourth abdominal segment at base and apex more or less medially sinuate.

A somewhat small subfamily universally distributed, but scantily represented in the fauna of British India. It contains four divisions, of which only two require notice here.

Division *CORIZARIA*.

Corizaria, *Stål, En. Hem.* iii, p. 97 (1873).

Anterior lateral margins of the pronotum not or obtusely sinuate; areole at anterior apical area of corium quadrangular.

The above characters are sufficient to enable the *Corizaria* to be distinguished from the *Serinetharia*, the only other division found in British India.

The *Corizaria* are now all included in one genus; a number of others have been proposed, but are by general consent considered only as sectional divisions of the genus *Corizus*.

Genus **CORIZUS**.

Corizus, *Fallen, Spec. Nov. Hem. disp. meth. exhib.* p. 8 (1814).
Niesthrea, *Spin. Ess. Hém.* p. 245 (1840).
Rhopalus, *Fieber, Eur. Hem.* p. 232 (1861).
Brachycarenus, *Fieber, l. c.* p. 236 (1861).
Colobatus, *Muls. & Rey, Pun. France,* pp. 105 & 137 (1870).
Subg. Liorhyssus, *Stål, En. Hem.* i, p. 222 (1870).
Subg. Arhyssus, *Stål, l. c.* i, p. 223 (1870).
Stictopleurus, *Stål, Öfv. Vet.-Ak. Förh.* 1872, no. 6, p. 55.
Æschyntelus, *Stål, l. c.* 1872, no. 6, p. 55.
Peliochrous, *Stål, En. Hem.* iii, pp. 97 & 98 (1873).

Type, *C. crassicornis*, Linn., a Palæarctic species, also reported from America.

Distribution. Universal.

First joint of the antennæ short, incrassated, not or very slightly passing the apex of the head, fourth joint longer than the third; head more or less narrowed behind the eyes and moderately porrectly produced in front.

The species have the hemelytra more or less transparent and the venation strongly developed; the membrane is transparent hyaline.

676. **Corizus rubicundus,** *Sign. Ann. Soc. Ent. Fr.* 1859, p. 86; *Kirby* (Rhopalus), *J. Linn. Soc., Zool.* xxiv, p. 97 (1891).

Head and pronotum reddish-ochraceous; head sometimes with a central line at apex, and generally with the area of the ocelli blackish; pronotum with an anterior and posterior transverse black fascia, both centrally broken; a central line at base of head, continued through the anterior pronotal fascia, and the posterior margin of the pronotum ochraceous; scutellum black, its apex

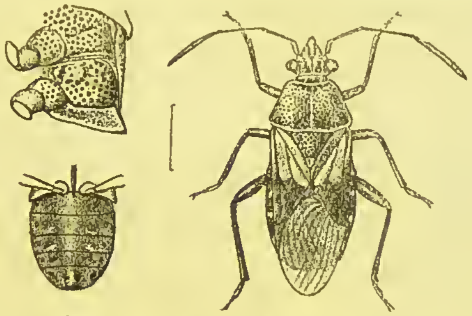

Fig. 245.—*Corizus rubicundus.*

reddish or ochraceous; corium ochraceous, its apical area more or less reddish-piceous or reddish: body beneath red; abdomen with a series of luteous spots on each lateral area, the extreme lateral margins alternately black and ochraceous; legs castaneous; the head, pronotum, and scutellum coarsely punctate; lateral margins of the body, disk of body beneath, and legs somewhat longly hirsute.

Length 6 to 6½ millim.

Hab. Ceylon (*Green*).

I agree with Kirby in considering Signoret's description somewhat loose and taken from a discoloured specimen. This appears to be the commonest species of *Corizus* in Ceylon, or certainly the one most commonly received from that island.

677. **Corizus bengalensis,** *Dall.* (Rhopalus) *List Hem.* ii, p. 528 (1852).

"Testaceous; head with several black points and lines; pronotum thickly and finely punctured with black, with the anterior and lateral margins impunctate, and with a transverse black line, interrupted in the middle close to the anterior margin; scutellum somewhat acute at the apex, punctured with black and clothed with long whitish hairs, the apex very minutely punctured, whitish; elytra transparent, nervures of the basal portion yellowish; wings transparent, iridescent; back of the abdomen black, thickly and minutely punctured, with the apical segment impunctate; the disk with two fulvous spots placed one behind the other, and on each side of the penultimate segment at its posterior margin a small yellowish spot; the last segment has the margins and a short central streak yellow; margins yellow, indistinctly banded with ferruginous: body beneath ochraceous; abdomen impunctate, clothed with short pale hairs; sternum thickly punctured; centre

of mesosternum black, with a distinct canal; legs pale yellow, very minutely punctured with brown; tarsi with the tips of the first and third joints and the claws blackish; rostrum pale yellow, with the apex black; antennæ pale yellow, with a brown line along the upper surface of the first three joints." (*Dallas.*)

Length 6 to 6½ millim.

Hab. North Bengal (*Campbell, Brit. Mus.*). Bombay; Bor Ghât (*Dixon*).

678. **Corizus semicruciatus,** *Motsch. Bull. Soc. Nat. Mosc.* 1863, p. 77

Head, pronotum, scutellum, clavus, base, apex, and apical margin of corium pale brown; corium pale greenish-white and talc-like; four spots on anterior area of pronotum, two smallest central, one larger near each anterior angle, a central longitudinal line on posterior pronotal area, ochraceous; scutellum with a subcruciform levigate ochraceous carina; legs ochraceous, femora with a subapical brown annulation; apices of the tarsi black.

Length 4 millim.

Hab. Ceylon (*Lewis*).

679. **Corizus brevicollis,** *Motsch. Bull. Soc. Nat. Mosc.* 1863, p. 77.

Allied to *C. semicruciatus,* but the thorax shorter and unicolorous, subferruginous; fuscous-punctate; membrane at base with a median rufous-testaceous spot; apex punctured on each side with piceous, an apical median spot translucent: body beneath rufous-testaceous; eyes prominent, piceous; head rufous-ferruginous, anteriorly deflected, shining, apex longitudinally ridged, the elevated portion somewhat whitishly pallescent; antennæ and legs cretaceous obscurely annulated with fuscous.

Length 3 millim.

Hab. Ceylon; Nuwera-Ellia (*vide Motschoulsky*).

Division *SERINETHARIA.*

Serinetharia, *Stål, En. Hem.* iii, p. 97 (1873).

Anterior lateral margins of the pronotum distinctly angulately emarginate; areolus at interior apical area of corium triangular.

These insects are almost universally distributed; the two largest genera are *Serinetha* and *Jadera*, the first almost confined to the Old, and the last entirely represented in the New World. In the Palæarctic region their numbers are much fewer.

Genus **SERINETHA.**

Serinetha, *Spin. Ess.* p. 247 (1837); *Stål, En. Hem.* iii, p. 99 (1873).
Leptocoris, *Hahn, Wanz. Ins.* i, p. 200 (1831).
Pyrrhotes, *Westw.* (part.) *in Hope Cat.* ii, p. 6 (1842).
Lygæomorphus, *Blanch. Hist. des Ins.* iii, p. 116 (1840).
Tynotoma, *Amy. & Serv. Hém.* p. 220 (1843).

Type, *S. abdominalis,* Fabr.

Distribution. Ethiopian and Oriental Regions.

Third joint of the rostrum as long as the fourth or longer; first joint of the antennæ a little shorter than the head; ocelli slightly nearer to the eyes than to each other; a very distinct nodule behind eyes; pronotum with a distinct anterior collar, its lateral margins ampliated and more or less convex, angularly emarginate before the outer angles of the anterior collar, its posterior margin subtruncate; corium with the lateral margins distinctly reflexed except on apical area; membrane with numerous prominent longitudinal veins; hemelytra broader and longer than the abdomen; legs moderately long and slender, posterior legs with the tibiæ longer than the femora.

680. **Serinetha abdominalis**, *Fabr.* (Lygæus) *Syst. Rhyng.* p. 226 (1803); *Burm.* (Leptocoris) *Handb.* ii, p. 305 (1835); *Blanch.* (Lygæomorphus) *Hist. des Ins.* iii, p. 116 (1840); *Westw.* (Pyrrhotes) *in Hope, Cat.* ii, p. 26 (1842); *Stål, Hem. Fabr.* i, p. 68 (1868).
Lygæus augur, *Fabr.* (part.) *Ent. Syst.* iv, p. 161. 88 (1794).
Leptocoris rufus, *Hahn, Wanz. Ins.* i, p. 201, f. 102 (1831).
Serinetha taprobanensis, *Dall. List Hem.* ii, p. 461 (1852).
Leptocoris bahram, *Kirkaldy, Bull. Liverpool Mus.* ii, p. 46 (1899).

Sanguineous, in the variety *taprobanensis* ochraceous; antennæ, legs, membrane, disks of sternum and abdomen beneath piceous, the piceous area beneath less intense and greyishly pilose; head rugosely excavated; pronotum thickly and somewhat coarsely punctate, the lateral margins hirsute; legs longly pilose.

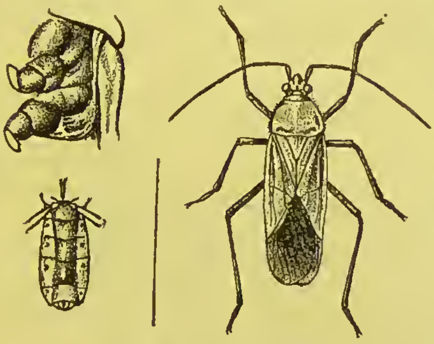

Fig. 246.—*Serinetha abdominalis.*

Length 16 to 20 millim.

Hab. Bombay (*Brit. Mus.*). Calcutta (*Ind. Mus.*). Assam. Ceylon (*Green & Lewis*). Upper Tenasserim (*Coll. Dist.*).—Island of Socotra. The pale form *taprobanensis*, Dall., is apparently dominant in Ceylon; it is, however, not infrequent at Calcutta, and is the Socotran form recently redescribed by Kirkaldy.

681. **Serinetha rufomarginata**, *Fabr.* (Lygæus) *Ent. Syst.* iv, p. 152. 56 (1794); *Dall. List Hem.* ii, p. 460 (1852); *Stål, Hem. Fabr.* i, p. 68 (1868).

Piceous; head, lateral areas of pronotum, lateral margins of corium, both above and beneath, lateral margins of sternum and abdomen and apex of abdomen sanguineous; the black coloration beneath greyishly pilose; pronotum obsoletely centrally carinate; apical joint of antennæ somewhat greyishly pilose; head with a very distinct incision in front of and between the ocelli.

Length 18 to 21 millim.

Hab. Calcutta (*Ind. Mus.*).—Usually received from North Borneo and the Philippines.

682. **Serinetha augur**, *Fabr.* (Cimex) *Spec. Ins.* ii, p. 366 (1781); *Burm.* (Leptocoris) *Handb.* ii, p. 305 (1835); *Stål, Hem. Fabr.* i, p. 68 (1868).
Lygæus chalcocephalus, *Fabr. Syst. Rhyng.* p. 226 (1803).

Pale sanguineous; antennæ, rostrum, legs, and membrane piceous; pronotum very distinctly centrally carinate and finely punctate, its lateral margins moderately hirsute.

Length 14 to 16 millim.

Hab. Bengal (*Stockholm Mus.*). Calcutta (*Ind. Mus.*). Bombay (*Elliott*). Madras. Ceylon (*Green*). Assam (*Coll. Dist.*). Upper Tenasserim (*Coll. Dist.*).—Also received from West Yunnan, the Malay Peninsula, and Hainan.

683. **Serinetha corniculata**, *Stål, Berl. ent. Zeit.* x, p. 381 (1866).

Croceous; antennæ excepting basal joint, apex of rostrum, three large lateral spots to sternum, membrane, lateral segmental series of transverse spots to abdomen, tibiæ, and tarsi blackish; head with a short conical tubercle in front of eyes, pronotum with distinct collar; hemelytra slightly punctate, the lateral margins somewhat rounded and broadly subreflected; pronotal carina distinct.

Length 14 millim.

Hab. "India Orientalis" (*Stockholm Mus.*).

I have not seen this species.

684. **Serinetha vicina**, *Dall. List Hem.* ii, p. 460 (1852).
Astacops nigricornis, *Walk. Cat. Het.* v, p. 36. 12 (1872).
Serinetha coxalis, *Kirby, J. Linn. Soc., Zool.* xxiv, p. 93 (1891).

Red; antennæ except at extreme base beneath, scutellum, membrane, legs except the coxæ, sternum, and ventral surface of abdomen, except at the sides and extremity, black.

"Easily recognizable by the conspicuous red coxæ on a black background" (*Kirby*).

Length 14 millim.

Hab. Ceylon (*Green*).—Also recorded from the Philippines and Timor.

685. **Serinetha dallasi**, *Dohrn, Stett. ent. Zeit.* xxi, p. 402 (1860).

Reddish-brown, coarsely punctate; head red, the margins fuscous-pilose; eyes and ocelli sanguineous; pronotum with a distinct anterior collar and with a median carinate line, posteriorly fuscescent; membrane black; beneath obsoletely reddish-brown; legs, antennæ, excepting base of first joint, piceous; rostrum black and reaching the middle of the third abdominal segment.

Length 12 to 15 millim.

Hab. Ceylon (*Dohrn*).

A species unseen by the writer.

Family BERYTIDÆ.

This family is readily distinguished from the Coreidæ by the long and slender legs, with the nodulosely clavate apices of the femora.

The Berytidæ have been often treated as a section of the family Coreidæ, as by Dallas and Uhler, and by the present writer in the 'Biologia Centrali-Americana,' but the consensus of opinion is now in favour of separation, and that view is here adopted. Stål (En. Hem. iv, p. 127, 1874) incorporated the Berytidæ with the Lygæidæ. The family is not a large one, and we know most about the Palæarctic species, which have been more assiduously collected, their small size and fragile structure having apparently caused them to be overlooked by tropical collectors. This is evident by the paucity of our knowledge concerning the species in British India; of these only three can now be enumerated, two of which represent new genera. The Berytidæ are probably universally distributed.

Synopsis of Genera.

A. Posterior femora not reaching apex of abdomen; hemelytra shorter than abdomen. PALEOLOGUS, p. 421.

B. Posterior femora reaching or passing apex of abdomen; hemelytra not shorter than abdomen.

  a. Pronotum convex, its anterior lateral margins sinuate .... METACANTHUS, p. 422.

  b. Pronotum long, subquadrate, its lateral margins straight .... HUBERTIELLA, p. 423.

Genus **PALEOLOGUS**, nov.

Type, *P. feanus*, Dist.

Distribution. Burma.

Body long, narrow; posterior femora not reaching apex of abdomen; hemelytra much shorter than abdomen; head deflected anteriorly, with two spines at apex, and a longer spine above them starting from between the antennal bases, gradually narrowed and pointed and extending considerably beyond the lower apical spines; pronotum longer than the head, subquadrate, a strong spine directed forward at lateral basal angles of anterior lobe, and a similar spine directed backward at each lateral angle, and a long, more upwardly directed spine near basal centre; scutellum armed with a long backwardly directed spine; hemelytra extending a little beyond the middle of abdomen, the upper surface of which is

more or less concavely excavate; antennæ with the basal joint longest and with its apex incrassated, second shorter than third, fourth very short and moderately incrassate; rostrum with the first joint reaching eyes, second joint longest; legs with the anterior and intermediate femora and tibiæ almost subequal in length, posterior tibiæ much longer than posterior femora, apices of femora moderately clavate.

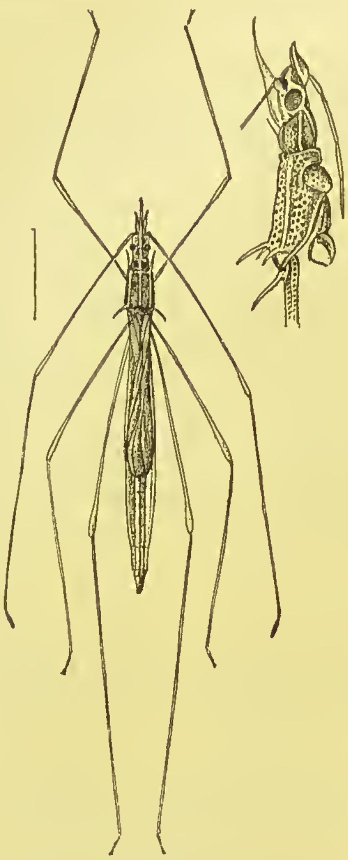
Fig. 247.—*Paleologus feanus.*

686. **Paleologus feanus**, sp. n.

Pale ochraceous, legs luteous; pronotum with two tubercular spots on anterior lobe, and with three longitudinal pale luteous levigate fasciæ, one central and two lateral, on posterior lobe; pronotum, clavus, and corium distinctly thickly punctate, lateral margins of corium palely levigate; membrane large, palely infuscated; abdomen above and beneath testaceous; sternum coarsely punctate. Structural characters as detailed in generic diagnosis.

Length 10 millim.

Hab. Burma; Karennee (*Fea*).

Genus **METACANTHUS**.

Metacanthus, *Costa, Atti Ac. Nap.* 1848, p. 258; *Fieb. Eur. Hem.* p. 213 (1861); *Saund. Hem. Het. Brit. Islds.* p. 65 (1892).
Armanus, *Muls. & Rey. Pun. France, Cor.* p. 187 (1870).

Type, *M. elegans*, Curtis, a Palæarctic species.

Distribution. Palæarctic and Oriental Regions.

Elongate, sides of the head behind the eyes subparallel, vertex raised and convex; antennæ long and slender, first joint with the apex clavate, second and third subequal, apical short and thickened; pronotum convexly raised and trituberculate posteriorly; scutellum with a long curved spine arising from near its base; clavus very short and apical margin of the corium very long, membrane large; legs very long and slender, femora clavate at apices.

Although only one Oriental species is known, there are doubtless many others to be discovered, their small and fragile forms easily escaping the attention of collectors.

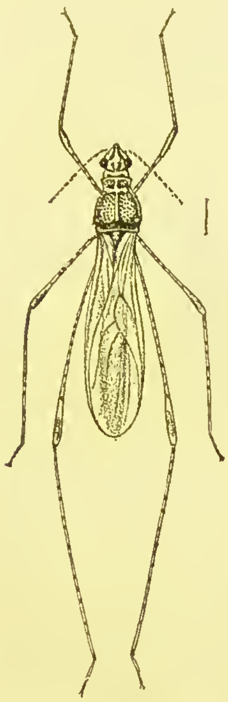

Fig. 248.—*Metacanthus pulchellus.*

687. **Metacanthus pulchellus,** *Dall. List Hem.* ii, p. 490 (1852).

"Pale testaceous; head impunctate, brownish, with the sides and a longitudinal central line whitish; pronotum thickly and finely punctured, with three whitish tubercles forming a transverse line near the anterior margin, and a raised whitish line running down the centre of the pronotum and terminating in a large tubercle at the posterior margin; scutellum with a long, upright, slightly crooked, whitish spine; hemelytra semitransparent throughout, wings transparent; legs whitish, with nnmerous minute brown or blackish rings; clubs of the femora and tips of the tarsi brown; antennæ whitish, with numerous brown rings similar to those on the legs; second and third joints about equal; apical joint short, ovate, black." (*Dallas.*)

Length 4 millim.

Hab. North India (*Boys, Brit. Mus.*).

The figure is taken from the type, the only specimen I have seen.

Genus HUBERTIELLA.

Hubertiella, *Kirkaldy, J. Bombay N. H. Soc.* xiv, p. 302 (1902).

Type, *H. cardamomi*, Kirkaldy.

Distribution. Ceylon.

Elongate; hemelytra as long as the abdomen; posterior femora passing the apex of abdomen; head unarmed, convex, deflected anteriorly; rostrum reaching the apical margin of metasternum, basal joint shorter than the head, about reaching the area of the ocelli; first joint of each of the antennæ with its apex incrassated and about twice as long as second, third longer than second, fourth short and thickened; pronotum tricarinate, and with three small tubercles on posterior area, the carinæ not reaching the slightly sinuate posterior margin; odoriferous apertures very large; scutellum armed with a long curved spine; tarsi three-jointed, first joint longer than the other two together, third longer than second.

688. **Hubertiella cardamomi,** *Kirkaldy, J. Bombay N. H. Soc.* xiv, p. 303, pl. A. f. 16, pl. C. f. 5 (1902).

Head and anterior lobe of pronotum brown with yellowish hairs, posterior lobe ochraceous with large golden punctures, two large dark spots on anterior lobe and the same on posterior lobe; antennæ and legs luteous, thickly granulated with black; apical joint of antennæ excluding apex black; eyes black; head

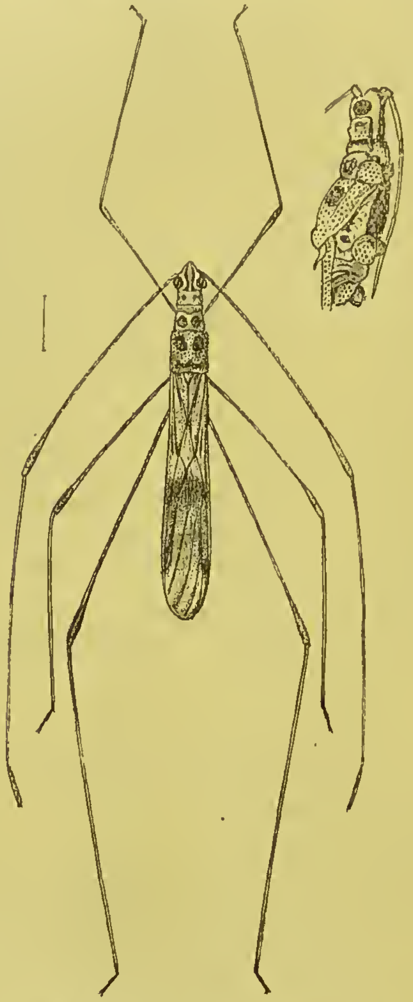

Fig. 249.—*Hubertiella cardamomi.*

beneath and sternum blackish with yellowish hairs; hemelytra hyaline, the membrane infuscated; abdomen above and beneath pale reddish-brown, beneath with an obscure sublateral fasciate line, the whole thickly covered with very short pale hairs.

Length 6 millim.

Hab. Ceylon; Pundaluoya (*Green*).

Found by Mr. Green on the under surface of leaves of Cardamom (*Elettaria cardamomum*).

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